Report

COMPARING ACCEPTABILITY OF NATIVE UNIX AND RE-ENGINEERED AS/400 MANUFACTURING SOFTWARE PACKAGES

Submitted to

ANDERSEN CONSULTING

July 27, 1993

Submitted by

INPUT

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COMPARING ACCEPTABILITY OF NATIVE UNIX AND RE-ENGINEERED AS/400 MANUFACTURING SOFTWARE PACKAGES

I. Background

At the completion of an earlier study on the acceptability of UNIX manufacturing software, Andersen requested that followup interviews be conducted to determine the relative acceptability of products written in native UNIX compared to products re-engineered from an existing AS/400 application. Forty-three followup interviews were conducted from July 20 to July 26, 1993. Respondents ranked the acceptability of the six type of packages shown in Exhibit 1.

II. Findings

A. Principal Approaches for Selecting Software

By looking at the rankings and taking comments into consideration, there are two principal ways in which software packages are selected.

- Companies for whom the software's origin (native UNIX or re-engineered AS/400) is the determining criteria; *then* the level of functional requirements is decided on. This is called the "vertical" selection approach in this report, since the *columns* in Exhibit 1 are controlling. About two-thirds of the companies interviewed fall into this category.

- The other principal approach is for a company to first determine what level of requirements is most suitable and then decide which, if any, software origin is favored. This is called the "horizontal" approach here, because the *rows* in Exhibit 1 are controlling. About a quarter of the companies interviewed fall into this category.

- Less than 10% of the companies interviewed fall into a mixed category of selection, where complex combinations of requirements and software origin were used.

Exhibit 2 summarizes the preferences for the vertical, horizontal and mixed approaches. Within each approach there can be a further preference for native UNIX or re-engineered AS/400 (either origin can be acceptable in the horizontal or mixed approaches).

- In both of the "vertical" and "horizontal" modes, the native UNIX product is favored somewhat more than the re-engineered AS/400 product.

- Exhibit 3 summarizes the preference for software origin.

  - Almost half prefer a native UNIX product

  - Over one-third prefer a re-engineered AS/400 product

  - About one out of seven would accept either (i.e., their motivation is purely requirements driven)

Exhibit 4 combines the data from Exhibits 2 and 3 in a matrix, showing the combinations.

B. Importance of the Degree to Which Functional Requirements Are Met

In rating the importance of functional selection criteria, respondents almost always give first choice to either "exceeds your requirements" or "meets all your requirements". Respondents were split evenly between which of the two was most important. "Meets minimum requirements" was usually the third choice.

This split was uniform between "vertical" and "horizontal" selection criteria as well as whether native UNIX or re-engineered AS/400 was favored.

Exhibit 5 summarizes this situation.

C. Reasons for Preference

Because of the way in which the issues were presented to the respondents, the reasons for preferring native UNIX over re-engineered AS/400 (or vice-versa) are a mixture of positives and negatives.

- Native UNIX is seen as a better technical fit and more efficient than a re-engineered AS/400 product.

- There seems to be fairly wide doubt whether all of the functionality of the re-engineered product can be carried over onto the UNIX platform and whether full advantage will be taken of the UNIX's technical capabilities.

- The re-engineered AS/400 product, on the other hand is seen as a tested, working product.

D. Likelihood of Equating Native UNIX and a Re-engineered AS/400 Product

After respondents had stated their preferences, they were probed as to the conditions under which they would be willing to change their preference (i.e, to put native UNIX and re-engineered AS/400 on the same footing).

Having taken a position favoring either native UNIX or a re-engineered AS/400 product, many respondents were quite resistant to describing the conditions where the other product would be viewed equally.

- Exhibit 6 contains comments which illustrate the resistance toward re-engineered AS/400 products by those favoring native UNIX.

- Exhibit 7 contains comments coming from those favoring a re-engineered AS/400 product and resistant to native UNIX.

The reasons for resistance are similar to those supporting a particular software origin in the first place.

Another, somewhat smaller group *would* consider the alternative. These comments are shown in Exhibits 8 and 9. These comments can be summed up as: "Prove there isn't much difference and I'll consider alternatives."

III. Summary and Recommendations

A. Summary

The origins of a software product for the UNIX platform are important.

- A large group of companies will confine their evaluations to either native UNIX or re-engineered AS/400 products (given that choice).
- Even where meeting or exceeding requirements is the primary criterion, the origin of the software is still important.

About half of the companies interviewed would prefer native UNIX products. They are not sure that all of the functionality of a re-engineered AS/400 product would survive and, an overlapping thought, are not sure that the re-engineered product would take full advantage of the UNIX environment.

B. Recommendations

The key word to describe the feelings of those favoring native UNIX is "doubt". However, almost all of these doubters seem to have little concrete experience on which to base their conclusions. Putting these doubts to rest will depend on (a) the objective success of re-engineering the product, and (b) how the new product is presented in the marketplace.

Any re-engineered product should address market concerns pre-emptively, in INPUT's opinion:

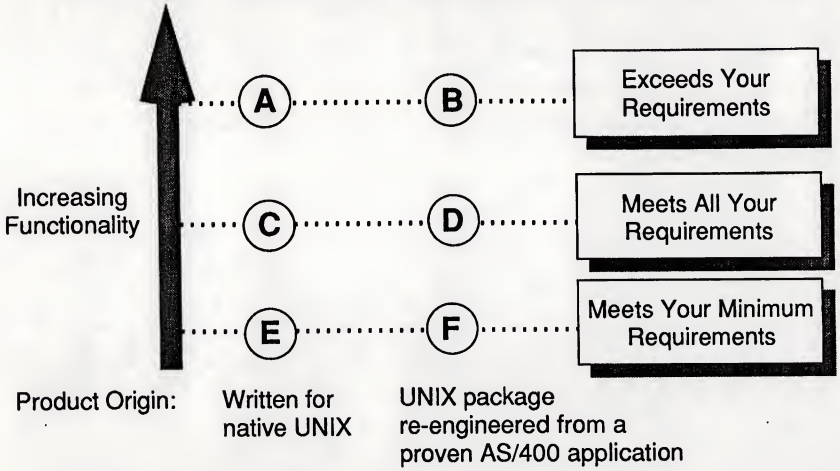
- A feature-by-feature checklist, at a minimum.
- An objective, third party comparison of operational functionality, preferably.
- Resource consumption comparisons to leading native UNIX packages, again preferably from a third party.
- Early, positive customer experiences. If necessary, installations should be made on concessionary terms in order to control time and quality.
- The AS/400 origins should be cited, but not be treated as a selling point in itself and should not be cited independently of the other marketing factors listed above.

INPUT believes that there is a sizable market for a UNIX platform product in a relatively narrow time window. The re-engineered AS/400 approach is a feasible way of getting to the market quickly.

Exhibit 1

Evaluation of UNIX-Based Manufacturing Packages

[Circled letters refer to different hypothetical software packages]



- Assumes that price, maintainability, and technical factors (e.g., response time, reliability) are equivalent for native UNIX and re-engineered packages)

Exhibit 2

"Vertical" versus "Horizontal" Preferences

"Vertical"
(Software origin most important) 68%

- UNIX: 38%
- AS/400: 30%

"Horizontal"
(Looks at extent to which requirements are met and then chooses software origin) 28%

- UNIX: 9%
- AS/400: 2%
- Either: 12%

Mixed (Not easily classifiable) 9%

- UNIX: 2%
- AS/400: 5%
- Either: 2%

N=43

Exhibit 3

Software Origin Preferences

Native UNIX	49%
UNIX Package Re-engineered from AS/400	37%
Either Acceptable	14%
	100%

N=43

Exhibit 4

Software Origin Versus Selection Approach

	Software Origin Preference			
Selection Approach	UNIX	AS/ 400	Either	Total
"Vertical"	38%	30%	n/a	68%
"Horizontal"	9%	2%	12%	23%
"Mixed"	2%	5%	2%	9%
TOTAL	49%	37%	14%	100%

N=43

Exhibit 5

Degree to Which Requirements Are Met: Importance

- "Exceeds your requirements" and "Meets all your requirements":
  - Evenly split between *first* and *second* choice
  - No appreciable differences between UNIX and AS/400
- "Meets Miminum Requirements": Almost always *third* choice
- Platform preferences are almost always absolute: Miminum requirements in preferred platform are more acceptable than exceeding requirments on the other platform

Exhibit 6

Comments From Those Favoring Native UNIX and Are Resistant to Considering Re-engineered AS/400

I've never seen a software product take full advantage of new technology when it is re-engineered.

Nothing would make me consider the AS/400 alternative [said several times].

Better use of UNIX technology if a system is designed for it.

My experience with re-engineering is that it's a conversion of an old design.

A re-engineered product is not as helpful as a new product.

UNIX is the installed base and the strategic direction of our company.

Have had better experience with native UNIX.

Don't have a lot of faith in a re-engineered product.

Exhibit 6 (Cont.)

Comments From Those Favoring Native UNIX and Are Resistant to Considering Re-engineered AS/400

I don't like a system that has been re-engineered.

Prefer one that has been engineered for the platform.

I've been through re-engineered products and the product is not quite as good as the original version of the product.

I just don't like porting things.

I really want native UNIX.

If we had the need for an AS/400 product I would get that.

A re-engineered package means a loss of functionality and features.

Converted packages are not as efficient.

Re-engineered products don't do exactly what you want.

May be some limitations if the package is based on the AS/400.

Is "portability" real?

Exhibit 7

Comments From Those Favoring A Re-engineered AS/400 Product And Are Resistant to Considering Native UNIX

The AS/400 has been proven.

Would have to improve on the original's functionality.

Nothing would make me consider the native UNIX alternative [said several times].

When software is re-engineered you get a little better functionality.

Get upgraded function when going from the AS/400.

AS/400 has more flexibility than UNIX.

I know the AS/400 [said several times].

I don't know UNIX.

We already are running code that was originally AS/400 on a UNIX system.

Would consider if retraining users was minimal.

Exhibit 8

Comments From Those Favoring Native UNIX and Would Consider Re-engineered AS/400

A re-engineered package would have to take a hard look at what UNIX can do and take advantage of it.

We would have to see how efficient the re-engineered product is.

Is it as clean and efficient as a native product?

A re-engineered product would have to match all the measurable benefits of the native product.

Would have to see it in use in other places to verify that it would not be different [from the original AS/400 version].

Show the performance is there.

Guarantee the quality.

Need side-by-side comparison.

I would have to be convinced that it was just as good as the native.

Sometimes re-engineered products are really more suitable than they were on the original platform.

Would have to pilot the re-engineered offering to test its efficiency.

Exhibit 9

Comments From Those Favoring A Re-engineered AS/400 Product and Would Consider Native UNIX

It would have to have improved functionality.

Would have to see what UNIX can really do.

Native UNIX would have to have as much functionality.

Native UNIX would have to be proven out.

Prove the application software runs the same on either system.

Proposal

DETERMINING THE RECEPTIVITY OF UNIX SOFTWARE IN THE DISCRETE MANUFACTURING SECTOR IN THE U.S/CANADA MARKET

Submitted to

ANDERSEN CONSULTING

May 11, 1993

Submitted by

INPUT

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201-801-0050
Fax: 201-801-0441

DETERMINING THE RECEPTIVITY OF UNIX SOFTWARE IN THE DISCRETE MANUFACTURING SECTOR IN THE U.S/CANADA MARKET

I. Background

Andersen Consulting is considering porting MACPAC for the AS/400 to the HP/Informix Unix platform. Andersen wants to understand buyer reception to such a product offering. INPUT has been invited to submit this proposal describing the research to be undertaken to gauge buyer receptivity.

II. Scope

This study will assess the U.S./Canada market and address the issues below. (Similar studies will assess the European and Asia/Pacific markets and will be proposed separately.)

- Within the discrete manufacturing sector, how likely are companies to replace their manufacturing, financial and distribution applications in the next three years? How much of the replacement will be packaged software?
- What will be the more important acquisition criteria used to select packaged software? (This includes, but is not limited to, cost, ease of use, features, portability, and vendor reputation.)
- What are customers' current plans for choosing products from specific vendors?
- How important is the technical environment to buyers in general? (This includes hardware platform, operating system, DBMS.) What are the perceived strengths and weaknesses of the UNIX platform as seen by prospective customers? How does the HP/Informix combination compare to other hardware/DBMS combinations?

- How does the market generally view porting manufacturing applications to the UNIX platform (as opposed to being written from scratch)? What are seen as the strengths and weaknesses of porting? How does the market view the AS/400 platform as a platform of origin?

- How large is the likely market in the U.S. for packaged software in the discrete manufacturing sector over the next three years? What is the likely share for Unix-based products?

- To what extent are the preceding "Scope" points affected by company size? (Grouped, for example, into $50-100 million, $100 million - $1 billion, over $1 billion)

- To what extent are there regional variations in the U.S. (by Andersen's four regions)?

III. Conduct of the Work

INPUT proposes to answer the questions under "Scope" by conducting 125 structured telephone interviews among U.S. and Canadian discrete manufacturing firms. This sample size will allow inferences to be made in sub-segments based on geography and company size.

INPUT will prepare a draft questionnaire which will be reviewed with Andersen.

Respondents will not be informed of Andersen's sponsorship of the study. Company names of respondents will not be associated with detailed findings; Andersen will be supplied a list of companies interviewed and a distribution of types of titles of respondents. Respondents will be qualified as being in the recommendation/approval process for their company's manufacturing systems planning. As an incentive to supply information, respondents will be supplied a "sanitized" summary of the study, which will be reviewed with Andersen before release.

Questionnaire data will be reviewed for completeness and accuracy and entered into an analysis database, probably using the ABSURV analysis package; open-ended questions will be coded wherever possible. If Andersen desires, a copy of the database and/or completed questionnaires will be made available to Andersen, with respondent identifiers removed.

INPUT will prepare a written report as well as presentation materials (overhead transparency format) containing the study's findings. (INPUT and Andersen will agree on the sequence in which these materials will be supplied.)

IV. Schedule

The study will be conducted according to the following schedule:

Week	Activity
1	Draft and review questionnaire; receive Andersen target SIC codes, company size groups and Andersen geographic areas.
2	Conduct test interviews
3-4	Conduct remaining interviews
5	Data review and database input
6	Analyze results and prepare findings
7	Prepare and make presentation in Chicago
8	Prepare written report [Note: Activities in weeks 7 and 8 can be reversed.]

V. Fee

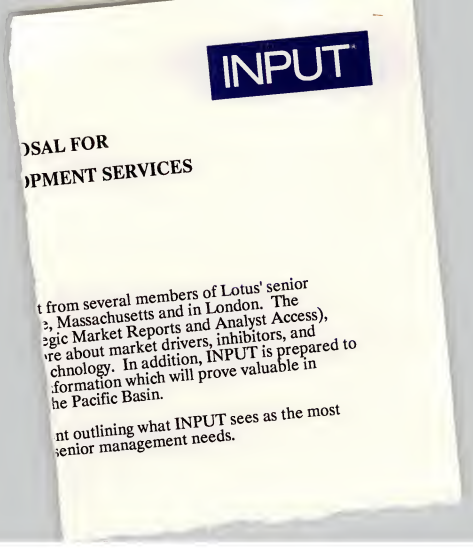
INPUT's professional fee for this study will be $23,000. One half of this amount ($11,500) is due and payable at the time of project authorization. The remainder plus expenses is due at the submission of the final report. Out-of-pocket expenses (primarily travel, production and telephone charges) are not expected to exceed $3,000.

AUTHORIZATION

To authorize the project as specified, please sign and return one copy of this proposal along with the initial fee. Upon acceptance by INPUT, a countersigned copy of the proposal will be returned to Andersen.

AUTHORIZED BY:	ACCEPTED BY:
Andersen Consulting	**INPUT**
_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

- keep separate
- offer special incentive? (or maybe don't need to because we have name & #
- Have special story prepared for interviewers ["How did you get my name?"]


INPUT
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chnology. In addition, INPUT is prepared to
formation which will prove valuable in
he Pacific Basin.
nt outlining what INPUT sees as the most
enior management needs.

YMG - special category

ANDERSEN CONSULTING
ARTHUR ANDERSEN & CO., S.C.

AMERICAS SOFTWARE
(312) 507-1043 / (312) 507-1048

Andersen Consulting
69 West Washington St.
Chicago, IL 60602

Date: 6/10/93

(201) 801-0441

To: THOMAS O'FLAHERTY INPUT Office: _____

From: BRIAN PAWLUS Pages to follow: 2

Comments: TOM,
LIST OF CLIENTS. I WILL TRY TO FILL IN "?" ON THE LIST. ALSO, IF YOU HAPPEN TO OBTAIN MORE OR DIFFERENT CLIENT CONTACTS, PLEASE FEEL FREE TO USE THEM. THANKS.

BRIAN PAWLUS (312) 507-7848

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If any problems result with this transmission, please call person listed below:

Operator: Sara Bond Phone: (312) 507-4192

Company	Company Location	Client Contacts	Title	Phone Number
Wells Aluminum	South Bend , IN	Mr. Travis Holmes	Mgr. Systems Services	(219) 234-8100
APV Crepaco		Mr. Jim Peterson	MIS Manager	
American Meter	Nebraska City, NE	Mr. Gary Cambell	IS Supervisor	(402) 873-3359
Zytec	Eden Prairie, MN	Mr. Jon Hanson	MIS Director	(507) 637-2966
BMC	Minneapolis, MN	Mr. Michael Hawks	Controller	?
Reinz Wisconsin Gasket	Milwaukee, WI	Mr. John Shelton	Manager IS	(414) 354-4900
Boehringer Mannheim	Indianapolis, IN	Mr. Bill Miller	?	(317) 845-2000
		Ms. Deanna Hoover	UNIX Systems Coord.	(317) 576-3298
Kuhlman	Lexington, KY	Ms. Liz Furman	Accounting Manager	(419) 243-2121
Zimmer	Warsaw, IN	Mr. Dave Edelsten	?	(219) 267-6131
		Ms. Mary Beth Rohr	Director of Data Services	(219) 267-6131
TRW Seatbelt				
Masco Industries	Taylor, MI	Mr. Richard A. Manoogian	Chairman/CEO	(313) 274-7405
Johnson Control	Plymouth, MI	Mr. Rexx Crayne	UNIX Systems Coord.	(313) 454-5000
		Mr. Norbert Buehmann	CADCAM Manager	(313) 454-5255
Amoco Tech Co.	Central Region ?	?	?	?
Siemens Stromberg	Lake Mary, FL	Mr. Stephen Hell	Director Data Processing	(407) 942-5000
Murray	?	Mr. Bill Kirber	Manager MFG. Systems	?
Zarn	Reidsville, NC	Mr. Steven Andrews	Vice President Finance	(919) 349-3324
Saft	Greenville, NC	Ms. Elizabeth Krize	MIS Manager	(919) 830-1600
Douglas Quikut	?	Nathan Howard	Plant Manager	?
Westinghouse (P.R.)	?	?	?	?
Varco	Houston, TX	Mr. Joe Zmarzly	MIS Director	(713) 937-5000
Chromecraft	?	Mr. Steve Healy	Controller	?
Rheem	Fort Smith, AR	Mr. Ronald Schrodt	VP Mat and Sys	(501) 646-4311
	Montgomery, AL	Mr. Edward Nowicki	Manager of MIS	(205) 260-1500
Smith International	Houston, TX	Mr. Keith Presley	Director of MIS	(713) 443-3370
		Mr. Barry Heppenstall	VP manufacturing	(713) 443-3370
Reliability	Alexandria, VA	Mr. William Leddy	Manager of IS	(703) 671-3800
	Houston, TX	Mr. Steven L. Mathews	Manager of IS	(713) 492-0550
Carbomedics	Austin, TX	Ms. Aline Barrington	MIS Network Specialist	(512) 873-3200
		Mr. Darryl Cummings	Application Manager	(512) 873-3200
Fisher Control	Austin, TX	Mr. James Coffman	MIS Manager	(512) 835-2190

		Mr. Robert Havekost	Application Dev. Mgr.	(512) 835-2190
		Mr. Tom Dodge	Director of Mfg.	(512) 835-2190
Pellerin Milnor	Kenner, LA	Mr. Justin Lazarre	VP of IS	(504) 467-9591
		Mr. Tony Cloud	UNIX Systems Coord	(504) 467-9591
Oval Strapping	Pacific Region ?	?	?	?
Epson Portland	Hillsboro, OR	Mr. Bruce Zentner	MIS Manager	(503) 645-1118
		Mr. Richard Sutherland	UNIX Systems Coord	(503) 645-1118
Kwikset	Anaheim, CA	Mr. Charles Good	Tech Services Manager	(714) 999-2250
		Mr. Gerald Kraft	Applications Manager	(714) 535-8111
Teledyne Controls	West Los Angeles, CA	Mr. Jonathon Agasse	Data Processing Mgr	(310) 820-4616
		Mr. Sonny Ringor	VP Manufacturing	(310) 820-4616
Schlage Lock	San Francisco, CA	Mr. John Gasswint	Tech & Operations Mgr	(415) 467-1100
		Mr. James Allendorf	Manager/Systems/Progr	(415) 467-1100
Husky Injection Molding	Bolton, ON Canada	Mr. John Pakrul	IS Manager	(416) 951-5000
		Mr. Robert Schad	President	(416) 951-5000
Newbridge Technologies	Canada ?	?	?	?

DRAFT

APPLICATIONS DIRECTIONS IN THE MANUFACTURING SECTOR

I am calling from INPUT, a research and consulting firm in Teaneck, New Jersey. We are conducting a study on applications development in manufacturing. The information that you provide will be confidential and neither your name nor your company's name will be connected with any of the information in this study. In return for your assistance, we will provide you with a summary of the study's findings at no charge.

I would like to understand your personal involvement with manufacturing applications. Please tell me how you are involved (circle "**approve**" and/or "**recommend**" as appropriate):

- Approve/recommend expenditures
- Approve/recommend new applications
- Approve/recommend changes to the technical environment
- Approve/recommend vendors to be used

[If none of the above are circled, ask respondent what person they would recommend, thank them and terminate the survey.]

1a. Which of the following applications may be replaced in your firm in the next three years? What is the approximate probability of this occurring (for each application)? [Use table below.]

1b. Is your firm considering the use of a software package for applications that may be replaced? What is the probability of using a package? [Use table below.]

IF PACKAGES ARE ARE BEING CONSIDERED, GO TO 3.

Application	% Prob	Package % Prob
MRP	_____	_____
Distribution	_____	_____
Engineering	_____	_____
Financials	_____	_____

1c. Would you consider an integrated application solution from one vendor, i.e., an application solution that would combine, for example, the manufacturing, distribution, and financial components?

_____

_____

_____

2a. Why are packages not being considered?

_____

_____

_____

2b. What changes would make your firm consider using a package?

_____

_____

_____

Thank you for your cooperation. We will send you a study summary in about six weeks.

3a. What is driving the replacement?

_____

_____

_____

3b. In evaluating software packages for the applications above, please rate the importance of the following selection criteria below, using a scale of 1 to 5, with 5 being highest importance. Please comment on your rating; for example, if the criteria apply to one application more than another.

Criteria	Rating	Comments
Functionality	_____	_____
Ease of Use	_____	_____
Client/Server Technology	_____	_____
Cost	_____	_____
Portability	_____	_____
Vendor reputation	_____	_____
Global Presence of vendor	_____	_____
Installation Support by vendor	_____	_____
Other:		
_____	_____	_____
_____	_____	_____

3c. Which hardware/operating systems are being considered?

_____

_____

3d. What people or organizational units will be involved in making evaluations?

_____

_____

4. Is your firm currently evaluating packages?

Yes _____ No _____

If yes, which one(s)?

_____

_____

_____

5a. Some of the major operating environments that a package can run on include UNIX, AS/400, OS/2, Windows NT, and MVS. What do you see as the strengths and weaknesses of each of these as the operating environment for your applications?

	Strengths	Weaknesses
UNIX	_____	_____
	_____	_____
AS/400	_____	_____
	_____	_____
OS/2	_____	_____
	_____	_____
Windows NT	_____	_____
	_____	_____
MVS	_____	_____
	_____	_____

5b. Overall, on a scale of 1 to 5, with 5 being highest, how well do you think that each of these environments would meet your needs in 1994? In 1996? If there is a change, what is the reason?

	1994	1996	Reason
UNIX	_____	_____	_____
			_____
AS/400	_____	_____	_____
			_____
OS/2	_____	_____	_____
			_____
Windows NT	_____	_____	_____
			_____
MVS	_____	_____	_____

6a. Consider a fully functional, mature application written for an operating system other than UNIX. What do you see as the advantages and disadvantages of re-engineering that application to run under the UNIX environment?

Advantages (+ porting it)

Disadvantages

6b. What do you see as the advantages and disadvantages for re-engineering the application from an MS-DOS base to a UNIX environment?

Advantages

Disadvantages

6c. From the AS/400?

Advantages

Disadvantages

7a. A number of major hardware and DBMS vendors offer UNIX-based products which could be used as platforms to run applications on. On a scale of 1 to 5 (with 5 being highest), how would you rate the suitability of the following UNIX-based products for running manufacturing applications software?

[Note: "Don't know" is acceptable.]

Hardware	Rating	Reason (if 1/2 or 4/5)
DEC (Alpha)	_____	_____
HP	_____	_____
IBM (RS6000)	_____	_____
Sun	_____	_____
Software		
Sybase	_____	_____
Informix	_____	_____
Oracle	_____	_____
Progress	_____	_____

7b. Are there particular hardware/DBMS combinations in the preceding list that you believe would be especially attractive as a UNIX platform to your organization?

_____

_____

_____

7c. Are there other combinations not listed that would be attractive as a UNIX platform?

_____

_____

_____

8. If the designers of a manufacturing software asked your advice on what should be included in the next generation of software, what advice would you give?

_____

_____

_____

THANK YOU FOR YOUR PARTICIPATION.

INPUT

Proposal

DETERMINING THE RECEPTIVITY OF UNIX SOFTWARE IN THE DISCRETE MANUFACTURING SECTOR IN THE U.S/CANADA MARKET

Submitted to

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- To what extent are the preceding "Scope" points affected by company size? (Grouped, for example, into $50-100 million, $100 million - $1 billion, over $1 billion)
- To what extent are there regional variations in the U.S. (by Andersen's four regions)?

titles Head of Applications

III. Conduct of the Work

INPUT proposes to answer the questions under "Scope" by conducting 125 structured telephone interviews among U.S. and Canadian discrete manufacturing firms. This sample size will allow inferences to be made in sub-segments based on geography and company size.

INPUT will prepare a draft questionnaire which will be reviewed with Andersen.

Respondents will not be informed of Andersen's sponsorship of the study. Company names of respondents will not be associated with detailed findings; Andersen will be supplied a list of companies interviewed and a distribution of types of titles of respondents. Respondents will be qualified as being in the recommendation/approval process for their company's manufacturing systems planning. As an incentive to supply information, respondents will be supplied a "sanitized" summary of the study, which will be reviewed with Andersen before release.

Questionnaire data will be reviewed for completeness and accuracy and entered into an analysis database, probably using the ABSURV analysis package; open-ended questions will be coded wherever possible. If Andersen desires, a copy of the database and/or completed questionnaires will be made available to Andersen, with respondent identifiers removed.

INPUT will prepare a written report as well as presentation materials (overhead transparency format) containing the study's findings. (INPUT and Andersen will agree on the sequence in which these materials will be supplied.)

will accept UNIX oriented platform.

IV. Schedule

The study will be conducted according to the following schedule:

Week	Activity
1	Draft and review questionnaire; receive Andersen target SIC codes, company size groups and Andersen geographic areas.
2	Conduct test interviews
3-4	Conduct remaining interviews
5	Data review and database input
6	Analyze results and prepare findings
7	Prepare and make presentation in Chicago
8	Prepare written report [Note: Activities in weeks 7 and 8 can be reversed.]

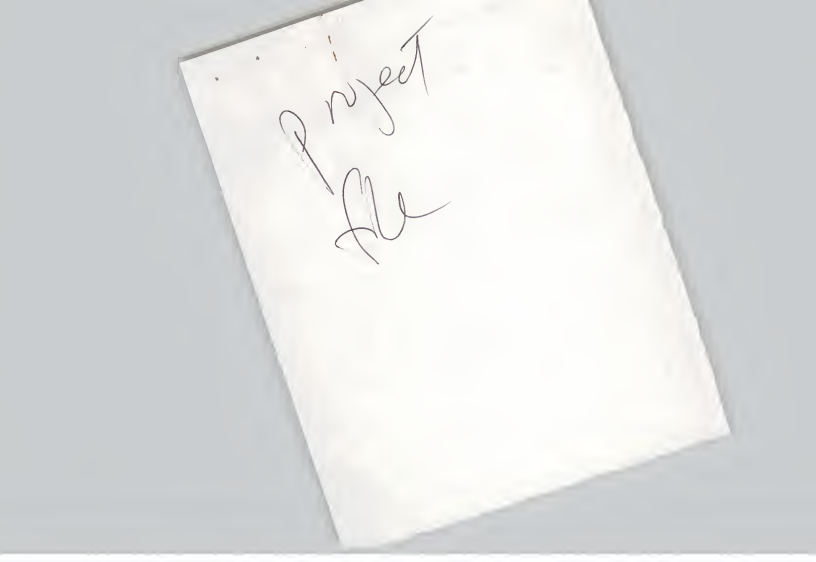
V. Fee

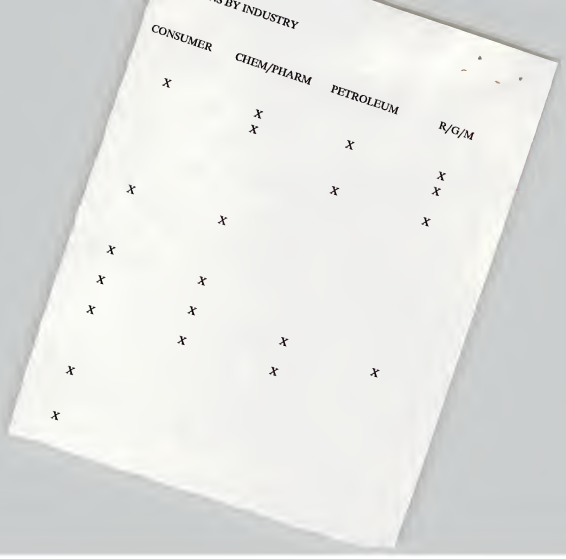
INPUT's professional fee for this study will be $23,000. One half of this amount ($11,500) is due and payable at the time of project authorization. The remainder plus expenses is due at the submission of the final report. Out-of-pocket expenses (primarily travel, production and telephone charges) are not expected to exceed $3,000.

AUTHORIZATION

To authorize the project as specified, please sign and return one copy of this proposal along with the initial fee. Upon acceptance by INPUT, a countersigned copy of the proposal will be returned to Andersen.

AUTHORIZED BY:	ACCEPTED BY:
Andersen Consulting	**INPUT**
Name _____	Name _____
Title _____	Title _____
Date _____	Date _____


Project
file


S BY INDUSTRY
CONSUMER
CHEM/PHARM
PETROLEUM
R/G/M

ORDER/INVOICE/FULFILLMENT

Acctg. ONLY:

Inv. Comp.	By:	Date:	Client #	Order #	Inv. #	Multi-Invoicing ____ of ____

CUSTOMER/INVOICE TO

ORIGINATOR (Signature) _____ DATE 7/16

APPROVALS

VP Sales/Res. _____

Date _____

Controller _____

Date _____

Company Anderson Consulting

Name Mr./Ms. Brian Pawlan

Position _____

Address _____

_____

City _____

Province _____

Phone 312-507-7848

CA Tax Rate _____

CT Tax 8% _____

Salutation _____

State _____

Zip _____

Country _____

Fax 312-507-1043

Tlx _____

Special instructions for invoicing, progress billing, or delayed payments, etc.

Bill immed

ORDER

Contract Year Beg. _____

End _____

❑ New Order (N1) ❑ Prior Yr (N3)

❑ Renewal (N2) ❑ Cancel

Invoice Type ❑ Fulfillment Only ❑ W/Order (OR) ❑ Monthly (MO) ❑ Quarterly (QT) ❑ Pending

Employee # Sold by:		Employee # Commission to:	
TAR	100%		%
	%		%
	%		%

CLIENT AUTH.

PO# _____

Attach all authorizing documents to white (contract) copy.

INPUT Contract ❑ Letter ❑ Verbal ❑

Fax

SHIP TO

Company _____

Name Mr./Ms. Steve

Position _____

Address _____

_____

City _____

Province _____

Salutation _____

State _____

Zip _____

Country _____

Phone _____

ITEM TYPE

- Subscription (SB)
- Custom (YC/ZC/KC)VC
- Multiclient (MC)
- Reports (RP)
- Copies (CP)
- Consult/Present (PR)
- Newsletter (NL)
- Reimbursed Costs (EX)
- Merger/Acq. (ME)
- Exec Overview (EO)
- Conf/Seminar (CN)

DETAIL

Indicate US, UK, FR, VA	Prod. ID/Year	Item Type Code	Item Description or Title	Quantity	Price	Shipped By	Date
US	YA6	YC	follower		$3,500		
			(no add'l expenses)				

Fulfillment to be completed in: ❑ Corporate ❑ London ❑ Virginia ❑ France ❑ Other _____

• White - Contract • Green - Fulfillment • Yellow - Invoice • Pink - Originator • Goldenrod - Sales Manager

M&S180 12/92

INPUT

INPUT®

Atrium at Glenpointe, 400 Frank W. Burr Blvd., Teaneck, NJ 07666 (201) 801-0050
Fax (201) 801-0441

FAX TRANSMITTAL FORM

Date: 7/21

To: Name: Renee

Tel./Location:

Co.:

Fax No:

From: TLP

Subject: Invoice for Follow-on to YA6

Confidential: Y / N
Urgent: Y / N

Page: 1 of 2

File: Chron
Contact
Other:

Please send invoice today for YA6 follow on (by fax)

Have invoice read: "For follow on interviews on acceptability of Re-engineered AS/400 package for UNIX Platform"

$4,500 (no addl expenses)

(OIF copy attached)

ORDER/INVOICE/FULFILLMENT

Acctg. ONLY

Inv. Comp.	By: RF	Date: 7/13	Client #	Order # 112716	Inv. # 112155	Multi-Invoicing of

CUSTOMER/INVOICE TO

ORIGINATOR (Signature) PL DATE 7/16

APPROVALS
VP Sales/Res.
Date
Controller
Date

Company Anderson Consulting
Name Mr./Ms. Brian Pawlik
Position
Address
City
Province
Phone 312-507-7848

CA Tax Rate
CT Tax 8%
Salutation
State
Zip
Country
Fax 312-507-1043
Tlx

Special instructions for invoicing, progress billing, or delayed payments, etc.
Bill immed

ORDER

Contract Year Beg.
End

❑ New Order (N1) ❑ Prior Yr (N3)
❑ Renewal (N2) ❑ Cancel

Invoice Type ❑ Fulfillment Only ❑ W/Order (OR) ❑ Monthly (MO) ❑ Quarterly (QT) ❑ Pending

Employee # Sold by: TAP 100 %
%
%

Employee # Commission to:
%
%
%

CLIENT AUTH.

PO#
Attach all authorizing documents to white (contract) copy.

INPUT Contract ❑ Letter ❑ Verbal ❑
Fax

SHIP TO

Company
Name Mr./Ms.
Position Same
Address
City

Province
Salutation
State
Zip
Country
Phone

ITEM TYPE

- Subscription (SB)
- Custom (YC/ZC/KC)VC
- Multiclient (MC)
- Reports (RP)
- Copies (CP)
- Consult/Present (PR)
- Newsletter (NL)
- Reimbursed Costs (EX)
- Merger/Acq. (ME)
- Exec Overview (EO)
- Conf/Seminar (CN)

DETAIL

Indicate US, UK, FR, VA	Prod. ID/Year	Item Type Code	Item Description or Title	Quantity	Price	Shipped By	Date
US	YA6	YC	followon		$4,500		
			(no add' expense)				

Fulfillment to be completed in: ❑ Corporate ❑ London ❑ Virginia ❑ France ❑ Other

• White - Contract • Green - Fulfillment • Yellow - Invoice • Pink - Originator • Goldenrod - Sales Manager

M&S180 12/92

INPUT

```
C:\ABSURV>TYPE [redacted]
PDN 18
FREQ 1-25
DESC2 1-25
FREQ 31-38
DESC2 31-38
LIST 1,41
LIST 1,42
LIST 1,43
LIST 1,44
LIST 1,45
LIST 1,46
LIST 1,47
LIST 1,48
LIST 1,51
LIST 1,53,54
LIST 1,55,60
LIST 1,56,61
LIST 1,57,62
LIST 1,58,63
LIST 1,59,64
FREQ 65-74
LIST 1,65,70,66,71,67,72,68,73,69,74
LIST 1,80
LIST 1,81
LIST 1,82
LIST 1,83
LIST 1,84
LIST 1,85
LIST 1,86-93
LIST 1,102
LIST 1,103
LIST 1,104

C:\ABSURV>
```

COMMAND: STRUCTURE
THE CURRENT DATA SET IS A:YA6-D.ABD REV#220

	IN USE	MAXIMUM	AVAILABLE
VARIABLES:	112	256	
CASES:	133	4000	
FILE SIZE:	552859	1638B224	
RECORD SIZE:	4095		
MAX CASES IN MEMORY		62	

VARIABLES DEFINED IN DATA SET ARE:

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
1	QNUM	N	1	6	0		
2	LIST_CODE	C	7	2			
3	SIC_CODE	N	9	4	0		
4	CODE	C	13	1			
5	REV	N	14	7	0		
6	COMPANY	C	21	50			
7	ADD1	C	71	50			
8	ADD2	C	121	50			
9	CITY_STATE	C	171	35			
10	ZIP	C	206	6			
11	NAME	C	212	30			
12	TITLE	C	242	20			
13	PHONE	C	262	12			
14	EXPEND	C	274	2			
15	NEW_APPL	C	276	2			
16	CHG_TECH	C	278	2			
17	VENDORS	C	280	2			
18	Q1AM	N	282	5	2		
19	Q1AD	N	287	5	2		
20	Q1AE	N	292	5	2		
21	Q1AF	N	297	5	2		
22	Q1BM	N	302	5	2		
23	Q1BD	N	307	5	2		
24	Q1BE	N	312	5	2		
25	Q1BF	N	317	5	2		
26	Q1BAXBM	N	322	7	4		
27	Q1BAXBD	N	329	7	4		
28	Q1BAXBE	N	336	7	4		
29	Q1BAXBF	N	343	7	4		
30	Q3A	C	350	100			
31	Q3BFTR	N	450	1	0		
32	Q3BEUR	N	451	1	0		
33	Q3BCSR	N	452	1	0		
34	Q3BISR	N	453	1	0		
35	Q3BCR	N	454	1	0		
36	Q3BPORTR	N	455	1	0		
37	Q3BVREPR	N	456	1	0		
38	Q3BGPVR	N	457	1	0		
39	Q3BO_1R	N	458	1	0		
40	Q3BO_2R	N	459	1	0		
41	Q3BFTC	C	460	75			
42	Q3BEUC	C	535	75			
43	Q3BCSC	C	610	75			
44	Q3BISC	C	685	75			

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
45	Q3BCC	C	760	75			
46	Q3BPORTC	C	835	75			
47	Q3BVREPC	C	910	75			
48	Q3BGPVC	C	985	75			
49	Q3BO_1C	C	1060	75			
50	Q3BO_2C	C	1135	75			
51	Q3C	C	1210	100			
52	Q3D	C	1310	100			
53	Q4	C	1410	1			
54	Q4_CMT	C	1411	100			
55	Q5AUNS	C	1511	75			
56	Q5AASS	C	1586	75			
57	Q5AOSS	C	1661	75			
58	Q5ANTS	C	1736	75			
59	Q5AMVS	C	1811	75			
60	Q5AUNW	C	1886	75			
61	Q5AASW	C	1961	75			
62	Q5AOSW	C	2036	75			
63	Q5ANTW	C	2111	75			
64	Q5AMVW	C	2186	75			
65	Q5BUN4	N	2261	1	0		
66	Q5BAS4	N	2262	1	0		
67	Q5BOS4	N	2263	1	0		
68	Q5BNT4	N	2264	1	0		
69	Q5BMV4	N	2265	1	0		
70	Q5BUN6	N	2266	1	0		
71	Q5BAS6	N	2267	1	0		
72	Q5BOS6	N	2268	1	0		
73	Q5BNT6	N	2269	1	0		
74	Q5BMV6	N	2270	1	0		
75	Q5BUN_C	C	2271	75			
76	Q5BAS_C	C	2346	75			
77	Q5BOS_C	C	2421	75			
78	Q5BNT_C	C	2496	75			
79	Q5BMV_C	C	2571	75			
80	Q6A_A	C	2646	100			
81	Q6A_D	C	2746	100			
82	Q6B_A	C	2846	100			
83	Q6B_D	C	2946	100			
84	Q6C_A	C	3046	100			
85	Q6C_D	C	3146	100			
86	Q7ADEC_R	N	3246	1	0		
87	Q7AHP_R	N	3247	1	0		
88	Q7AIBM_R	N	3248	1	0		
89	Q7ASUN_R	N	3249	1	0		
90	Q7AINF_R	N	3250	1	0		
91	Q7AORO_R	N	3251	1	0		
92	Q7APRO_R	N	3252	1	0		
93	Q7ASYB_R	N	3253	1	0		
94	Q7ADEC_C	C	3254	75			
95	Q7AHP_C	C	3329	75			
96	Q7AIBM_C	C	3404	75			
97	Q7ASUN_C	C	3479	75			
98	Q7AINF_C	C	3554	75			
99	Q7AORA_C	C	3629	75			
100	Q7APRO_C	C	3704	30			
101	Q7ASYB_S	C	3734	30			
102	Q7B	C	3764	25			

ABsurv+ rel 1.11
A:YA6-D.ABD 220

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
103	Q7C	C	3789	25			
104	Q8	C	3814	50			
105	REV_CODE	C	3864	1			
106	Q3A_1	C	3865	1			
107	Q3A_2	C	3866	1			
108	Q3C_1CD	C	3867	1			
109	Q3C_2CD	C	3868	1			
110	Q3_3CD	C	3869	1			
111	FILLER2	C	3870	25			
112	FILLER	C	3895	200			

These people plan to change an mfg app.

COMMAND: LIST MISSING VALUE TREATMENT: INCLUDE

REC#	ONUM	SIC_CODE	COMPANY	NAME	TITLE	PHONE	
1	100059	3629	ACME ELECTRIC CO	DONALD DONOVAN	SR. DB ANAL	716-655-3800	NY
2	100109	3511	ALLISON GAS TURBINE ENG	TIM WOODS	SYS ENG	317-230-2657	IN
3	100001	3824	AMERICAN METER	GARY CAMPBELL	I.S. SUPERVISOR	402-873-8273	NB
4	100089	3663	AMPEX	STU DUDLEY	MGR. DATA SYS DIV	415-367-2567	CA
5	100090	3678	AMPHENOL CORP	RON NYE	CORP. NETWORK ANAL	203-265-8900	CT
6	100042	3825	ANLALOGIC CORP	GEORGE MAVROIDES	SYS MGR	508\977-3000	MA
7	100110	3822	APPLIED AUTOMATION INC	DANIEL JONES	COMP. CTR. SUP	918-662-7000	OK
8	100002	3826	APPLIED BIOSCIENCE INC	DEEDAK ADVANI	MGR. SYS. DEV.	415-570-6667	CA 510-6666?
X9	100076	3555	BALDWIN GRAPHICS	JR RANDALL	MIS DIR	203-359-8214	CT 345-4420
10	100054	3531	BEARDSLEY AND PIPER	MIKE LAMPHIER	DIR OF MIS	312-237-3700	IL
11	100078	0	BLISS AND LAUGHLIN INDUSTRY INC	DENNIS WELLES	MGR. SYS. PROG.	708-333-1220	IL 325
12	100088	3679	BMC INDUSTRIES	VERNON LW	DB ADMIN	612-851-6045	MN 3581
13	100003	3826	BOEHRINGER MANHEIM	DEAN FLARIS	SR. SYS. ANAL	317-576-3219	IN
14	100129	3519	BRUNSWICK BOWLING AND BILLIARDS	MARY LOU WEISE	PROJ LEADER APPL PGM	616-725-3328	mich
15	100056	2511	BUSH INDUSTRIES INC	RON LATENYER	DIR. MIS	716-665-2000	NY
16	100004	3841	CARBOMEDICS	DARRYL CUMMINGS	APPL. MG.	512-873-3200	TX
17	100105	3593	CASCADE CORP	JIM KINDRED	MIS MGR	503-669-6300	OR
18	100112	3645	CATALINA LIGHTING	MARK WELLNERE	VP OF IS	305-558-4777	FL
19	100103	3531	CATERPILLAR INC	GARY TRESSLER	COMPUTER SYS SUP.	717-751-5304	PA 5123
20	100133	3531	CATERPILLAR INC	JOHN ZIAH	SYS MGR	309-675-1000	IL
21	100041	3559	CATY INDUSTRIES INC	MIKE WOODRICH	SYS ANAL	312-379-1121	IL
22	100101	2451	CAVALIER HOMES INC	DOUG CALDWELL	CONTROLLER	205-747-1575	AL
23	100085	3728	CHANDLER EVANS	TERRRY MC SWEENEY	DIR OF IS	203-236-0651	CT
24	100084	3541	CINCINATTI MILACRUN	MARY JOE BURNES	DIR CORP IS	513-841-7384	OH
25	100005	3629	COMPUTER PRODUCTS INC	COLIN KENTON	MICRO. SYS. ANALYST	407-451-1000	FL
26	100083	3625	CORE INDUSTRIES	WILLIAM HANDELMAN	MGR OF IS	313-642-3400	mich
27	100058	3821	COSTAR CORP	ROBERT KELLY	DIR MIS	617-868-6200	MA
28	100121	3491	CRANE CO	JOHN BRIGHT	PROGRAM ANAL	314-298-3565	MO
29	100131	3491	CRANE/KEMLITE	ROBERT SECOR Joliet	SYST. ANALYST	815-727-2251	IL 727-5K
30	100082	3824	CROSBY VALVE	JOE DESROISERS	SYS ANAL	508-394-3121	MA
31	100096	3829	DANIEL INDUSTRIES	DICK KAHRS	APPL. MGR	713-827-4306	TX
32	100048	3563	DRESSER INDUSTRIES INC	HAENRY PAULSEN	DIR OF IS	214-680-4100	TX
33	100092	3691	DURACELL INTERNATIONAL	SANDY DECKER	CORP.MGR. PROJCT LDR	203-796-4000	CT DK DK
34	100040	3561	DURION CORP	RON FISHER	MGR. SYS DEV	513-476-6100	OH
35	100039	3585	DYNAMICS CORP. OF AMERICA	KEVIN ROONIS	ACCTNG MGR	203-869-3211	CT DK-DK
36	100038	3625	EATON CORP.	FRED ZICKERT	MGR. SUPPORT	216-523-5000	OH
37	100111	3511	EDS-ALLISON GAS TURBINE	MORMAN NEED	SYS ANAL	317-230-2000	IN 230-2614
38	100114	3559	ELECTRO SCIENTIFC INDUSTY	JOHN HOWELL	DIR OF INFO TECH	503-641-4141	OR
39	100006	3679	ELECTROMAGNETIC SCIENCE	JIM MCLAUGHLIN	DIR. COMP. SERVICES	404-263-9200	GA DK DK
40	100106	3822	EMERSON ELECTRIC-THERMO INC	JULIE BREWSTER	APPL. MGR		
41	100007	3559	ESTERLINE TECHNOLOGIES	ERIC SETZ	INFO SYSTEMS SPEC.	206-453-6001	WA
42	100036	3679	EXIDE ELECTRONICS GROUP	VICKY TEALE	PROJ. MGR	919-872-3020	NC
43	100009	3564	FAAR CO	DICK ZOBEL	DIR. OF MIS	312-536-6300	CA # NC
44	100008	3728	FAIRCHILD INDUSTRIES	MARSHA HENDRIX	ASST. PERS. ADMIN.	703-478-5800	VA
45	100010	3585	FEDDERS CORP	KERLIS MORRE	MIS COMP OPER	908-381-7007	NJ
46	100035	2512	FLEXSTEEL INDUSTRY	DENNIS TROY	TECH. SYS. MGR	319-556-7730	IA NQ
47	100011	3491	FLOW TECHNOLOGIES	TOM DUCHARM	MIS MGR	713-934-6207	TX
48	100117	2431	FOJTASEK COMPANIES INC	RICHARD FOJTASEK	MGR. OF CORP IS	214-438-4787	TX
49	100108	3732	FOUR WINNS INC	TOM HOUSEMAN	MIS MGR	616-775-1351	MICH
50	100097	3732	FOUR WINNSINE ENG. CENTER	THOMAS HOUSEMAN		616-775-1351	mich
51	100012	2621	FRANKLIN ELECTRIC CO	BARRY GIBSON	MGR. OF IS	219-824-2900	IN

REC#	DNUM	SIC_CODE	COMPANY	NAME	TITLE	PHONE	
52	100013	3715	FRUEHAVF TRAILOR CORP	WILLIAM GARFIELD 7/22 Lm	DIR. OF IS 7/26 C	402-333-4900	NB
53	100120	3724	GE AIRCRAFT ENGINES	GREG LEVINSKY C	MGR. OF MFG	513-786-1344	oh 7/22
54	100068	3523	GEHL COMPANY	DICK SEMLER 7/22 C	DIR. MIS	414-334-9461	WI
55	100033	3821	GELMEN SCIENCE INC	DONNA LIGGETT N A 7/2 C	DIR OF CIS	313-665-0651	MI 7/22
56	100057	3826	HARCH CO	DUANE CHALOUDKA 7/21 NA	VP OF MIS 7/22 NA	303-669-3050	CO 7/27 NA
57	100073	3812	HARIS CORPORATION	CAROL PIOR Lm 7/22 7/23	ENG. ADMIN 7/26 NB	407-727-5968	FL 7/22
58	100037	3751	HARLEY DAVIDSON	JAMES FISHER 7/22 C	SYSTEM S/W ANAL	414-342-4680	WI
59	100125	2522	HAWORTH INC	HAL ECKEL 7/22 Lm 7/28	DIR IS C	616-393-3000	MI
60	100070	3336	HAYNES INTERNATIONAL	CHRIS DEIGHTON 7/22 C	MGR IS	317-456-6600	IN 6K
61	100014	2451	HOMES BY OAKWOOD INC	ROBERT FLOYD 7/22 NA 7/23	DIVISION CONTROLLER	704-463-7333	NC C RAQUEL
62	100094	3533	HUGHES CHRISTENSEN	AL ERMISI C	MGR	713-363-6914	Tx Raquel
63	100123	2591	HUNTER DOUGLAS	LOIS PETERSON 7/22 referred	OPS MGR Lm	201-627-8200	NJ myra
64	100093	3565	ILLINOIS TOOL WORKS INC	JIM GLESSELER 7/22 NA C	SR. TECH. SUPPORT	708-724-7500	IL
65	100102	3581	IMI CORNELIUS	GORDON KOPPERUDE 7/22 B NA	MGR IS 7/23 NA	612-421-6120	MI 7/26 Lm 7/23
66	100071	3496	INSTEEL INDUSTRIES	PETER ADAM 7/22 Lm	NETWORK ADMIN 7/23	919-786-3172	NC C 7/26
67	100064	3829	INSTRON CORP	DONNA SRISKY 7/22 C	MGR. OF APP DEV	617-828-2500	MAS Lm
68	100130	2499	ITNERMAGNETICS GENERAL	MARC TENULLO 7/22 C	MGR. MIS	518-456-5456	NY
69	100081	3531	JLG INDUSTRIES INC	JAMES JUSTICE 7/23 B C	MGR. MFG. SYS	717-485-5161	PA
70	100095	3822	JOHNSON CONTROL	NORBERT BUEHMAN 7/23	CAD/CAM MGR	313-454-5255	MI N Q 7/28
71	100069	3679	JOSLYN CORP	RACHEL MURDOCH 7/23 C	MGR DP	312-454-2900	IL C
72	100104	3648	JUNO LIGHTING	ED LARSON 7/23 NA	DATA PROC. MGR	708-827-9880	IL
73	100113	3612	JWP 371-9998	CATHY RISNER 7/23 Lm 7/24	DIR OF APP. DEV	914-935-3660	NY 606-5396
74	100065	3825	KEITHLY INSTRUMENTS	JOHN JURIS 7/23 Lm 7/26 m	MGR MIS 7/26 BC	216-248-0400	OH Lm
75	100067	3675	KEMMET CORP	LAURI SPRINGER 7/23	MGR.MAFG. APPL 7/26 BC	803-963-6300	SC COKAMEN
76	100061	3443	KETEMA INC	DAVE EBLING 7/23 7/24	SYST. ENG 7/24	215-639-2255	PA 7/26 C
77	100066	3821	KEWAUNEE SCIENTIFIC	DIANA SWINSON 7/23 NA	DIR OF IS 7/26 BC	704-873-7202	NC 7/26 NA
78	100080	3792	KIT MFG CO	DALE HORN C/B 7/23 C	SYS ADMIN	208-454-9291	ID
79	100015	3429	KNAPE AND VOUT MANUFACTURING CO.	BOB WOLFSEN 7/23 NA	IS MGR 7/26 C/B	616-459-3311	MI 7/27 Lm
80	100124	2522	KNOLL GROUP INC	JOHN KLEINSCMIDT 7/23 Lm	MGR INFO PROCESS	215-679-1828	PA 7/26 Lm
81	100016	2431	KOLBE AND KOLBE MILLWORK CO. INC	KATHY OTT 7/23 NA 7/26	MGR. OF DATA PROC	715-842-5666	WI
82	100017	3621	KOLLMORGEN CORP. ELECTRO OPTICAL DIVISION	ROBERT MORRISSETTE 7/23 NA	MGR. OF MIS 7/26 C	413-586-2330	MA
83	100087	3429	KWIKSET CORP	GERALD KRAFT 7/21 NA	APPL. MGR 7/22 NA	714-535-8111	Ca 7/27
84	100077	3442	LESLIE-LOCKE INC	DICK LAMBORN 7/23 NA 7/26 m	MGR-SYSTEM ANALYSIS	404-953-6366	GA 7/27 Lm
85	100063	3812	LORAL CORP.	GUY CAPOZZI 7/23 NQ	OFFICE ADMIN	212-697-1105	NY
86	100062	3825	LORAL FAIRCHILD	WILLIAM PLATT 7/23 NA	MGR. IS	914-968-2500	NY
87	100018	3829	LORD CORPORATION	JAMES ERTL 7/23 NA	MGR. MIS 7/26 C/B	814-456-8511	PA
88	100019	3646	LSI INDUSTRIES INC	BRUCE GIBSON 7/23 Lm	DIR. OF MIS	513-793-3200	oh
89	100050	825	LTX CORP	FRANK DEROSE 7/23 C	MGR IS	617-461-1000	MA
90	100020	2591	M AND B MINI BLIND CORP.	PETER CHOW 7/21 B2	MIS MGR	213-749-6333	Ca
91	100034	2431	MARVIN LUMBER AND CEDAR CO INC	DAVE BURRAL 7/23 C/B 7/26 m	IS MGR	218-386-1430	MN
92	100021	2434	MASCO CORP	DOUG WITHAM 7/26 Lm	DIR. OF IS	313-274-7405	MI
93	100074	3825	MEGATEST CORP	WALTER SAVOIE 7/21 C	MIS MGR	408-437-9700	Ca
94	100098	2434	MERILLAT INDUSTRIES	TOM LEWIS 7/26 Rec'd	CORP. DIR MIS	517-263-0772	MI
95	100022	3499	MOSLER INC	MICHEAL WEBER 7/26 C	MGR. PGM OPS	513-867-4000	oh
96	100060	3823	MTS SYSTEMS CORP	TED STARK 7/23 C/B 7/26 C	SR. MGR.OF BUS. APP	612-937-4460	MN
97	100051	3646	NATIONAL LINEN SERVICES INDUSTRY	BRAD SLANE 7/26 C	MGR. APPL. DEV	404-853-1000	GA
98	100052	3646	NATIONAL SERVICE INDUSTRY	BOB STRICKLAND 7/27 Lm	CONSULTANT	404-853-6026	GA 863-3144
99	100055	3821	NEWPORT CORP	LARRY JACKSON 7/23 BC	OPS AND PRO MGR	714-863-1611	Ca 7/27 C
100	100128	3561	OILGEAR CO	DAVE JENSON 7/23 NA	PROD SUP 7/26 C/B	414-328-5237	WI
101	100023	2431	OVERHEAD DOOR CORP.	DICK FULLERTON 7/23 NA	DIR. OF MIS 7/26 C/B	214-401-3086	TX WA 455-7400
102	100024	3713	PACCAR INC	STAN HANDON 7/23	DIR. OF ENG	206-251-2611	
103	100113	3559	PACKAGE MACHINERY CO	TED MARKIWICZ 7/27 Lm	MGR. DATA PROC	203-749-0000	CT

REC#	QNUM	SIC_CODE	COMPANY	NAME	TITLE	PHONE
104	100075	3594	PARKER HANNIFLAN CORP	JOHN WHITE 7/27 (C)	DIR BUS SYS	216-531-~~3950~~ 3K oh
105	100079	2452	PATRICK IND	PAUL ROMANETZ 7/27 CB	IS MGR	219-294-7511 IN
106	100132	3565	PAXAR CORP	ROBERT HIRSCH 7/27 NA	DIR IS	914-735-~~9328~~ NY 8200
107	100046	2582	PELLERN MILNOR	JUSTIN LAZARRE 7/27 (C)	VP OF IS	504-467-9591 LA
108	100030	3826	PERKIN ELMER CORP	JOHN RUSSO 7/27 B2	MGR. MAN. SYS	203-762-~~6339~~ CT ~~1600~~ 1K
109	100049	3563	RA JONES AND CO	ROBERT GRAY	ASST. DIR OF OPS	606-341-0400 KY
110	100100	3678	RAYCHEM CORP	MIKE OSTERMAN	SYS. DEV. MGR	415-361-7934 Ca
111	100127	3537	RAYMOND CORP	WENDELL MCGRATH 7/27 (C)	SYS PGM MGR	607-656-2127 NY
112	100025	3825	RELIABILTY	STEVEN MATTHEWS 7/27 CB	IS MGR	713-492-0550 TX
113	100126	3561	ROBBINS AND MEYERS FLUIDS HANDLY GROUP	ROBERT GENTRY 7/27	MGR GRP INFO SVCS	513-327-3111 oh
114	100004	3823	ROCKWELL INTERNATIONAL CORP	ROBERT SCHEUSSKI	DIR. STATEGIC SYS	412-565-4004 PA
115	100026	2431	ROLSCREEN CO INC	ARVIN VAN ZANTE	MIS MGR	515-628-1000 IA-Des Moines
116	100122	3691	SAFT AMERICA INC	DAVE FENDER	LOGISTICS MGR	912-247-2331 GA
117	100045	3429	SCHLAGE LOCK CO. INC	JAMES ALLENDORF	MGR. APPL. PROG.	415-467-1100 Ca
118	100027	2452	SCHULT HOMES CORP	LISA MCGLASHEN 7/27 (C)	IS MGR	219-294-3574 IN
119	100028	2451	SCHULT HOMES CORP.	MARK GOODMAN 7/27	SYSTEMS ADMIN.	219-825-5881 IN
120	100053	3835	SEALED POWER TECH	LARRY FINNER	APPL. PROG.	616-724-1829 MI
121	100072	3661	SIEMANS STOMBERG	ROBERT CURTIS	MGR. BUS APPL	407-955-5000 FL
122	100116	3533	SMITH INTERNATIONAL	PETE DAVIES	MGR OF MFG AND ENG	713-443-3370 TX
123	100099	2591	SPRINGS WINDOW FASHION	DAVID RUSSELL	DIR MIS	608-836-1011 WI
124	100029	3724	TELEDYNE	JOHN AGASSE	DP MGR	310-820-4616 Ca
125	100119	3714	TRW AUTOMOTIVE	PHILLIP VINENZETTI	DIR OF IS	615-272-2171 TN
126	100032	2399	TRW-VSSI	ROBERT BROCKETT	MATERIALS SUP	313-752-1315 MI
127	100118	3599	UNION SPECIAL CORP	JOHN LENZ	DIR DATA PROC	708-669-4564 IL
128	100091	3571	UNISYS CORP	PAUL SCHIMPFF	DIR OF OPS-SALES SYS	215-542-4011 PA
129	100086	3354	WELLS ALUMINUM CORP	TRAVIS HOLMES	MGR. SYS SRVS	219-234-8100 IN
130	100107	3511	WILLIAMS INTERNATIONAL	GREG KOMPERDE	MGR. SYS DEV	
131	100044	3089	ZARN INC	STEPHEN ANDREWS	VP OF FIN.	919-349-3324 NC
132	100047	3842	ZIMMER INC	DAVE EDELSTEN	VP OF INFO MGMT	219-267-6131 IN
133	100031	3679	ZYTEC CORP	JOHN HANSON	DIR. MIS	507-637-2966 MN

DHDOeOLR

Evaluation of UNIX-Based Manufacturing Packages

Written for native UNIX,
meets your minimum requirements ____

Written for native UNIX,
meets all your requirements,
with a slight increase in functionality ____

Written for native UNIX,
exceeds your requirements,
with a greater increase in functionality ____

UNIX package re-engineered from a proven
AS/400 application,
meets your minimum requirements ____

UNIX package re-engineered from a proven
AS/400 application,
meets all your requirements,
with a slight increase in functionality ____

UNIX package re-engineered from a proven
AS/400 application,
exceeds your requirements,
with a greater increase in functionality ____

606 525
3462

CONFIDENTIAL

INPUT Questionnaire

Project Code/Catalog No. 4A6-B

Study Title: Anderson Add-On

Interviewer Initials

Interview Date

QC Initials

QC Date

Data Entry Initials

Data Entry Date

Type of Interview:

- ☐ Vendor
- ☐ Telephone
- ☐ User
- ☐ On-Site
- ☐ Other
- ☐ Mail

Company: _____ Company Type: _____

Address: _____ Sales: _____

_____ # Employees: _____

_____

City/State/Zip: _____

Main Phone: ___/_____-_____ FAX # _____

Respondent(s):

Name	Title	Phone/Ext.

Referrals:

_____

_____

Industry (User Interviews Only):

- ☐ Discrete Mfg.
- ☐ Process Mfg.
- ☐ Transportation
- ☐ Utilities
- ☐ Communications
- ☐ Retail
- ☐ Wholesale
- ☐ Banking/Finance
- ☐ Insurance
- ☐ Medical
- ☐ Services
- ☐ Education
- ☐ Federal Government
- ☐ State & Local Government
- ☐ Consumer/Home
- ☐ Other Industry Specific
- ☐ Cross-Industry

Comments:

_____

_____

Thank you very much for agreeing to answer a followup question involving how you and your firm would evaluate packages which were developed using different approaches.

Please refer to the diagram title, "Evaluation of UNIX-Based Manufacturing Packages", that was faxed to you earlier.

1a. What would your preference be between the six different packages shown in the diagram? Please rank them from 1 to 6, with 1 being your first choice. It's fine if you want to give two or more choices the same rank (that is, award ties).

A ___

B ___

C ___

D ___

E ___

F ___

1b. Please briefly explain why you gave them these rankings?

(ASK THE FOLLOWING IF APPROPRIATE:)

1c. I notice that you gave a different rank to:
[name either or both, depending on rankings]

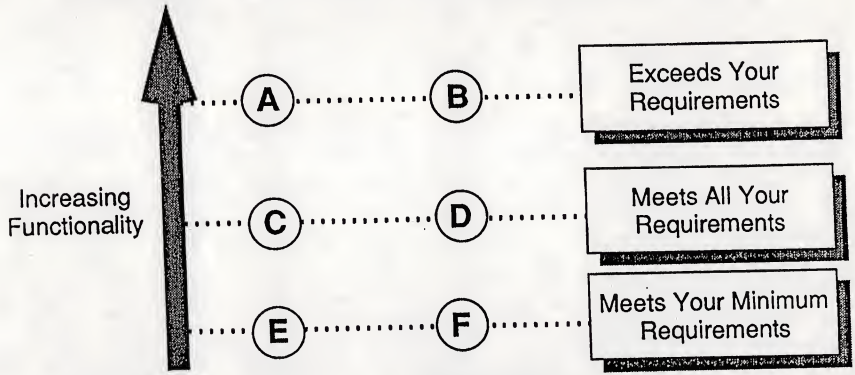
A and B

C and D

What, if anything, would have to be changed in order for you to give that pair [those pairs] an identical ranking?

Evaluation of UNIX-Based Manufacturing Packages

[Circled letters refer to different hypothetical software packages]



- Assumes that price, maintainability, and technical factors (e.g., response time, reliability) are equivalent for native UNIX and re-engineered packages)

07-14-1993 03:51PM FROM INPUT GRAPHICS/ACCTG

YAG

Andersen wants to
do 20-30 followup
interviews using Rec

Let's talk
Tom

Draft Followup Questionnaire

Thank you very much for agreeing to answer a followup question involving how you would evaluate packages which were developed using different approaches.

Please refer to the diagram titled, "Evaluation of UNIX-Based Manufacturing Packages", that was faxed to you earlier.

1a. What would your preference be between the six different packages shown in the diagram? Please rank them from 1 to 6, with 1 being your first choice. It's fine if you want to give two or more packages the same rank (that is, award ties).

1b. Please briefly explain why you gave them these rankings?

ASK THE FOLLOWING IF APPROPRIATE:

1c. I notice that you gave a different ranking to **[name either or both, depending on ranking]**
A and B

C and D

What, if anything, would have to changed for you to give that pair **[those pairs]** an identical ranking?

COMMAND: STRUCTURE
THE CURRENT DATA SET IS A:YA6-C.ABD REV#200

	IN USE	MAXIMUM	AVAILABLE
VARIABLES:	112	256	
CASES:	133	4000	
FILE SIZE:	552859	16388224	
RECORD SIZE:	4095		
MAX CASES IN MEMORY		62	

VARIABLES DEFINED IN DATA SET ARE:

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
1	@NUM	N	1	6	0		
2	LIST_CODE	C	7	2			
3	SIC_CODE	N	9	4	0		
4	CODE	C	13	1			
5	REV	N	14	7	0		
6	COMPANY	C	21	50			
7	ADD1	C	71	50			
8	ADD2	C	121	50			
9	CITY_STATE	C	171	35			
10	ZIP	C	206	6			
11	NAME	C	212	30			
12	TITLE	C	242	20			
13	PHONE	C	262	12			
14	EXPEND	C	274	2			
15	NEW_APPL	C	276	2			
16	CHG_TECH	C	278	2			
17	VENDORS	C	280	2			
18	Q1AM	N	282	5	2		
19	Q1AD	N	287	5	2		
20	Q1AE	N	292	5	2		
21	Q1AF	N	297	5	2		
22	Q1BM	N	302	5	2		
23	Q1BD	N	307	5	2		
24	Q1BE	N	312	5	2		
25	Q1BF	N	317	5	2		
26	Q1BAXBM	N	322	7	4		
27	Q1BAXBD	N	329	7	4		
28	Q1BAXBE	N	336	7	4		
29	Q1BAXBF	N	343	7	4		
30	Q3A	C	350	100			
31	Q3BFTR	N	450	1	0		
32	Q3BEUR	N	451	1	0		
33	Q3BCSR	N	452	1	0		
34	Q3BISR	N	453	1	0		
35	Q3BCR	N	454	1	0		
36	Q3BPORTR	N	455	1	0		
37	Q3BVREPR	N	456	1	0		
38	Q3BGPVR	N	457	1	0		
39	Q3BO_1R	N	458	1	0		
40	Q3BO_2R	N	459	1	0		
41	Q3BFTC	C	460	75			
42	Q3BEUC	C	535	75			
43	Q3BCSC	C	610	75			
44	Q3BISC	C	685	75			

calculate
26 - 18 + 22
19 + 23
20 + 24
21 + 25
none

freq
closed

26-29
26-29

above
31-40

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
45	Q3BCC	C	760	75			
46	Q3BPORTC	C	835	75			
47	Q3BVREPC	C	910	75			
48	Q3BGPVC	C	985	75			
49	Q3BO_1C	C	1060	75			
50	Q3BO_2C	C	1135	75			
51	Q3C	C	1210	100			
52	Q3D	C	1310	100			
53	Q4	C	1410	1			
54	Q4_CMT	C	1411	100			
55	Q5AUNS	C	1511	75			
56	Q5AASS	C	1586	75			
57	Q5AOSS	C	1661	75			
58	Q5ANTS	C	1736	75			
59	Q5AMVS	C	1811	75			
60	Q5AUNW	C	1886	75			
61	Q5AASW	C	1961	75			
62	Q5AOSW	C	2036	75			
63	Q5ANTW	C	2111	75			
64	Q5AMVW	C	2186	75			
65	Q5BUN4	N	2261	1	0		
66	Q5BAS4	N	2262	1	0		
67	Q5BOS4	N	2263	1	0		
68	Q5BNT4	N	2264	1	0		
69	Q5BMV4	N	2265	1	0		
70	Q5BUN6	N	2266	1	0		
71	Q5BAS6	N	2267	1	0		
72	Q5BOS6	N	2268	1	0		
73	Q5BNT6	N	2269	1	0		
74	Q5BMV6	N	2270	1	0		
75	Q5BUN_C	C	2271	75			
76	Q5BAS_C	C	2346	75			
77	Q5BOS_C	C	2421	75			
78	Q5BNT_C	C	2496	75			
79	Q5BMV_C	C	2571	75			
80	Q6A_A	C	2646	100			
81	Q6A_D	C	2746	100			
82	Q6B_A	C	2846	100			
83	Q6B_D	C	2946	100			
84	Q6C_A	C	3046	100			
85	Q6C_D	C	3146	100			
86	Q7ADEC_R	N	3246	1	0		
87	Q7AHP_R	N	3247	1	0		
88	Q7AIBM_R	N	3248	1	0		
89	Q7ASUN_R	N	3249	1	0		
90	Q7AINF_R	N	3250	1	0		
91	Q7AORQ_R	N	3251	1	0		
92	Q7APRQ_R	N	3252	1	0		
93	Q7ASYB_R	N	3253	1	0		
94	Q7ADEC_C	C	3254	75			
95	Q7AHP_C	C	3329	75			
96	Q7AIBM_C	C	3404	75			
97	Q7ASUN_C	C	3479	75			
98	Q7AINF_C	C	3554	75			
99	Q7AORA_C	C	3629	75			
100	Q7APRQ_C	C	3704	30			
101	Q7ASYB_S	C	3734	30			
102	Q7B	C	3764	25			

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
103	Q7C	C	3789	25			
104	Q8	C	3814	50			
105	REV_CODE	C	3864	1			
106	Q3A_1	C	3865	1			
107	Q3A_2	C	3866	1			
108	Q3C_1CD	C	3867	1			
109	Q3C_2CD	C	3868	1			
110	Q3_3CD	C	3869	1			
111	FILLER2	C	3870	25			+60
112	FILLER	C	3895	200			

3c Text listing

in H = 63
M
L

133

3A = was this coded?

4A6-4. KMP

Frequencies + Means for Q3B, 5B (94+96), 7a

Counts: Q4 (Y, N)

500 M + H light

Q 1B: per attached

COMMAND: XTAB MISSING VALUE TREATMENT: INCLUDE

MRP

*** CROSS TABULATION ***

sw

Q1BM Q1AM replace

	--	0.00	0.05	0.10	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.85	0.90	1.00	70.00	OTHER	TOTAL
--	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	28
0.00	0	26	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
0.20	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.50	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	1	0	6
0.60	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
0.70	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0.75	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3	0	0	5
0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
1.00	2	0	1	2	0	2	0	1	8	1	1	1	2	1	1	36	0	1	60
40.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
90.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	29	26	1	3	1	2	1	1	13	1	2	1	2	1	2	44	1	2	133

28

14

6

133

55

78

CHI SQUARE = 749.039 DF = 187 PROB = 0.0000

9 19 50

12 24 64

7 14 38

592

59

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
Apparel & Other Textile Products		
2391	High	Curtains & Draperies
Lumber & Wood Products		
2431	High	Millwork
2434	High	Wood kitchen cabinets
2451	High	Mobile homes
2452	High	Prefabricated wood buildings
Furniture & Fixtures		
2512	High	Upholstered household furniture
2521	High	Wood office furniture
2522	High	Office furniture, except wood
2541	High	Wood partitions & fixtures
2542	High	Partitions & fixtures, except wood
2591	High	Drapery hardware & blinds & shades
Stone, Clay, & Glass Products		
3291	High	Abrasive products
Fabricated Metal Products		
3442	High	Metal doors, sash, & trim
3448	High	Prefabricated metal buildings
3491	High	Industrial valves
3492	High	Fluid power valves & hose fittings
3494	High	Valves & pipe fittings, nec
Industrial Machinery & Equipment		
3511	High	Turbines & turbine generator sets
3531	High	Construction machinery
3532	High	Mining machinery
3533	High	Oil & gas field machinery
3534	High	Elevators & moving stairways
3535	High	Conveyors & conveying equipment
3536	High	Hoists, cranes, & monorails
3537	High	Industrial trucks & tractors
3548	High	Welding apparatus
3552	High	Textile machinery
3553	High	Woodworking machinery
3554	High	Paper industries machinery
3555	High	Printing trades machinery
3556	High	Food products machinery
3559	High	Special industry machinery, nec
3561	High	Pumps & pumping equipment
3563	High	Air & gas compressors
3565	High	Packaging machinery
3581	High	Automatic vending machines
3593	High	Fluid power cylinders & actuators
3594	High	Fluid power pumps & motors
Electronic & Other Electric Equipment		
3621	High	Motors & generators

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
Transportation Equipment		
3715	High	Truck trailers
3716	High	Motor homes
3732	High	Boat building & repairing
3792	High	Travel trailers & campers
3799	High	Transportation equipment, nec
Instruments & Related Products		
3821	High	Laboratory Apparatus & Furniture
3822	High	Enviromental Controls
3823	High	Process control instruments
3824	High	Fluid meters & counting devices
3829	High	Measuring & controlling devices, nc
Miscellaneous Manufacturing Industries		
3995	High	Burial caskets

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
Apparel & Other Textile Products		
2392	Medium	Housefurnishings, nec
Lumber & Wood Products		
2426	Medium	Hardwood dimension & flooring mills
2441	Medium	Nailed wood boxes & shook
2448	Medium	Wood pallets & skids
2449	Medium	Wood containers, nec
2499	Medium	Wood products, nec
Furniture & Fixtures		
2511	Medium	Wood household furniture
2514	Medium	Metal household furniture
2531	Medium	Public building & related furniture
2599	Medium	Furniture & furniture fixtures
Rubber & Misc. Plastics Products		
3061	Medium	Mechanical rubber goods
3069	Medium	Fabricated rubber products,nec
3084	Medium	Plastics pipe
3085	Medium	Plastics bottles
Primary Metal Industries		
3315	Medium	Steel wire & related products
3316	Medium	Cold finishing of steel shapes
3317	Medium	Steel pipe & tubes
Fabricated Metal Products		
3441	Medium	Fabricated structural metal
3443	Medium	Fabricated plate work (boiler shops)
3446	Medium	Architectural metal work
3493	Medium	Steel springs, except wire
3498	Medium	Fabricated pipe & fittings
3499	Medium	Fabricated metal products, nec
Industrial Machinery & Equipment		
3519	Medium	Internal combustion engines, nec
3523	Medium	Farm machinery & equipment
3549	Medium	Metalworking machinery, nec
3567	Medium	Industrial furnaces & ovens
3569	Medium	General industrial machinery, nec
3582	Medium	Commercial laundry equipment
3585	Medium	Refrigeration & heating equipment
3586	Medium	Service industry machinery, nec
3589	Medium	Service industry machinery, nec
3599	Medium	Industrial machinery, nec
Electronic & Other Electric Equipment		
3612	Medium	Transformers, except electronic
3613	Medium	Switchgear & switchboard apparatus
3625	Medium	Relays & industrial controls
3629	Medium	Electrical industrial apparatus
3645	Medium	Residential lighting fixtures
3646	Medium	Commercial lighting fixtures

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
Transportation Equipment		
3713	Medium	Truck & bus bodies
3724	Medium	Aircraft engines & engine parts
3743	Medium	Railroad equipment
3751	Medium	Motorcycles, bicycles, & parts
3795	Medium	Tanks & tank components
Instruments & Related Products		
3825	Medium	Instruments to measure electricity
3826	Medium	Analytical instruments
3827	Medium	Optical instruments & lenses
Miscellaneous Manufacturing Industries		
3993	Medium	Signs & advertising specialties

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
Apparel & Other Textile Equipment		
2396	Low	Automotive & apparel trimmings
Lumber & Wood Products		
2429	Low	Special product sawmills, nec
2435	Low	Hardwood veneer & plywood
2436	Low	Softwood veneer & plywood
2439	Low	Structural wood members, nec
Furniture & Fixtures		
2519	Low	Household furniture, nec
Paper & Allied Products		
2673	Low	Bags: plastics, laminated, & coated
2674	Low	Bags: uncoated paper & multiwall
2675	Low	Die-cut paper & board
2678	Low	Stationery products
Printing & Publishing		
2796	Low	Platemaking services
Rubber & Misc. Plastics Products		
3052	Low	Rubber & plastics hose & belting
3053	Low	Gaskets, packing & sealing devices
3086	Low	Plastics foam products
3088	Low	Plastics plumbing fixtures
Stone, Clay, & Glass Products		
3231	Low	Products of purchased glass
Primary Metals Industries		
3351	Low	Copper rolling and drawing
3353	Low	Aluminum sheet, plate, & foil
3354	Low	Aluminum extruded products
3355	Low	Aluminum rolling and drawing, nec
3356	Low	Nonferrous rolling and drawing, nec
Fabricated Metal Products		
3495	Low	Wire springs
3496	Low	Misc. fabricated wire products
Industrial Equipment & Machinery		
3524	Low	Lawn & garden equipment
3564	Low	Blowers & fans
3566	Low	Speed changers, drives, & gears
3568	Low	Power transmission equipment, nec
3596	Low	Scales & balances, exc. laboratory
Electronic & Other Electric Equipment		
3648	Low	Lighting equipment, nec
3669	Low	Communications equipment, nec
3675	Low	Electronic capacitors
3676	Low	Electronic resistors
3677	Low	Electronic coils & transformers
3679	Low	Electronic components, nec
Transportation Equipment		
3728	Low	Aircraft parts & equipment, nec

Short Title List of SIC Codes - Mixed Mode

Code	Ranking	Short Title
3812	Low	Search & navigation equipment
Misc. Manufacturing Industries		
391	Low	Jewelry, Silverware, & Plated Ware

MAC-PAC Regions

Region	States
Pacific	Alaska
	Arizona
	California
	Colorado
	Hawaii
	Idaho
	Montana
	Nevada
	New Mexico
	Oregon
	Utah
	Washington
	Wyoming
South	Alabama
	Arkansas
	Florida
	Georgia
	Kentucky
	Louisiana
	Mississippi
	North Carolina
	Oklahoma
	South Carolina
	Tennessee
	Texas
	Puerto Rico
Central	Illinois
	Indiana
	Kansas
	Kentucky
	Michigan
	Minnesota
	Missouri
	Nebraska
	North Dakota
	Ohio
	South Dakota
	Wisconsin
Northeast	Connecticut
	Delaware
	Maine
	Maryland
	Massachusetts
	New Hampshire
	New Jersey
	New York
	Pennsylvania
	Rhode Island
	Vermont
	Virginia
	West Virginia
	Washington DC
Canada	All Canadian Provinces

3541 Machine tools metal cutting
42 " " " forming
3543 Industrial patterns.
44 Special lines

3571 Electronic Computers.
72 storage devices.
75 Terminals
77 peripherals
78 Calculating/acctg equip

3592 Carburetors, pistons, ring valves

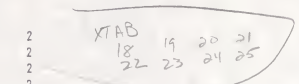
3711 Motor Vehicles & Car bodies

COMMAND: STRUCTURE
THE CURRENT DATA SET IS C:\ABSURV\YA6.ABD REV#183

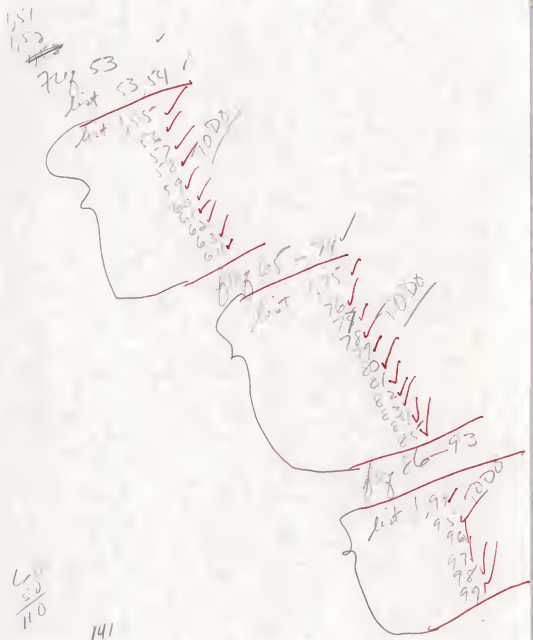
	IN USE	MAXIMUM AVAILABLE
VARIABLES:	101	256
CASES:	133	4000
FILE SIZE:	552859	16388224
RECORD SIZE:	4095	
MAX CASES IN MEMORY		62

VARIABLES DEFINED IN DATA SET ARE:

VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
1	GNUM	N	1	6	0		
2	LIST_CODE	C	7	2			
3	SIC_CODE	N	9	4	0		
4	CODE	C	13	1			
5	REV	N	14	7	0		
6	COMPANY	C	21	50			
7	ADD1	C	71	50			
8	ADD2	C	121	50			
9	CITY_STATE	C	171	35			
10	ZIP	C	206	6			
11	NAME	C	212	30			
12	TITLE	C	242	20			
13	PHONE	C	262	12			
14	EXPEND	C	274	2			
15	NEW_APPL	C	276	2			
16	CHG_TECH	C	278	2			
17	VENDORS	C	280	2			
18	Q1AM	N	282	5	2		
19	Q1AD	N	287	5	2		
20	Q1AE	N	292	5	2		
21	Q1AF	N	297	5	2		
22	Q1BM	N	302	5	2		
23	Q1BD	N	307	5	2		
24	Q1BE	N	312	5	2		
25	Q1BF	N	317	5	2		
26	Q1BAXBM	N	322	7	4		
27	Q1BAXBD	N	329	7	4		
28	Q1BAXBE	N	336	7	4		
29	Q1BAXBF	N	343	7	4		
30	Q3A	C	350	100			
31	Q3BFTR	N	450	1	0		
32	Q3BEUR	N	451	1	0		
33	Q3BCSR	N	452	1	0		
34	Q3B1SR	N	453	1	0		
35	Q3BCR	N	454	1	0		
36	Q3BPORTR	N	455	1	0		
37	Q3BVREPR	N	456	1	0		
38	Q3BGPVR	N	457	1	0		
39	Q3BO_1R	N	458	1	0		
40	Q3BO_2R	N	459	1	0		
41	Q3BFTC	C	460	75			
42	Q3BEUC	C	535	75			
43	Q3BCSC	C	610	75			
44	Q3B1SC	C	685	75			



VAR	NAME	TYPE	POS	LENGTH	DEC	ChoiceTbl	Description
45	Q3BCC	C	760	75			
46	Q3BPORTC	C	835	75			
47	Q3BVREPC	C	910	75			
48	Q3B6PVC	C	985	75			
49	Q3BO_1C	C	1060	75			
50	Q3BO_2C	C	1135	75			
51	Q3C	C	1210	100			
52	Q3D	C	1310	100			
53	Q4	C	1410	1			
54	Q4_CMT	C	1411	100			
55	Q5AUNS	C	1511	100			
56	Q5AASS	C	1611	100			
57	Q5AOSS	C	1711	100			
58	Q5ANTS	C	1811	100			
59	Q5AMVS	C	1911	100			
60	Q5AUNW	C	2011	100			
61	Q5AASW	C	2111	100			
62	Q5AOSW	C	2211	100			
63	Q5ANTW	C	2311	100			
64	Q5AMVW	C	2411	100			
65	Q5BUN4	N	2511	1	0		
66	Q5BAS4	N	2512	1	0		
67	Q5BOS4	N	2513	1	0		
68	Q5BNT4	N	2514	1	0		
69	Q5BMV4	N	2515	1	0		
70	Q5BUN6	N	2516	1	0		
71	Q5BAS6	N	2517	1	0		
72	Q5BOS6	N	251B	1	0		
73	Q5BNT6	N	2519	1	0		
74	Q5BMV6	N	2520	1	0		
75	Q5BUN_C	C	2521	75			
76	Q5BAS_C	C	2596	75			
77	Q5BOS_C	C	2671	75			
78	Q5BNT_C	C	2746	75			
79	Q5BMV_C	C	2821	75			
B0	Q6A_A	C	2896	100			
B1	Q6A_D	C	2996	100			
B2	Q6B_A	C	3096	100			
B3	Q6B_D	C	3196	100			
B4	Q6C_A	C	3296	100			
B5	Q6C_D	C	3396	100			
B6	Q7ADEC_R	N	3496	1	0		
B7	Q7AHP_R	N	3497	1	0		
B8	Q7AIBM_R	N	349B	1	0		
B9	Q7ASUN_R	N	3499	1	0		
90	Q7AINF_R	N	3500	1	0		
91	Q7AORA_R	N	3501	1	0		
92	Q7APRO_R	N	3502	1	0		
93	Q7ASYB_R	N	3503	1	0		
94	Q7ADEC_C	C	3504	75			
95	Q7AHP_C	C	3579	75			
96	Q7AIBM_C	C	3654	75			
97	Q7ASUN_C	C	3729	75			
98	Q7AINF_C	C	3804	75			
99	Q7AORA_C	C	3879	75			
100	filler1	C	3954	1			
101	FILLER	C	3955	140			



COMMAND: LIST MISSING VALUE TREATMENT: INCLUDE

Alpha sort please

REC#	QNUM	TITLE
1	100066	DIR OF IS
2	100077	MGR-SYSTEM ANALYSIS
3	100001	I.S. SUPERVISOR
4	100002	MGR. SYS. DEV.
5	100003	SR. SYS. ANAL
6	100004	APPL. MG.
7	100005	MICRO. SYS. ANALYST
8	100006	DIR. COMP. SERVICES
9	100007	INFO SYSTEMS SPEC.
10	100008	ASST. PERS. ADMIN.
11	100009	DIR. OF MIS
12	100010	MIS COMP OPER
13	100011	MIS MGR
14	100012	MGR. OF IS
15	100013	DIR. OF IS
16	100014	DIVISION CONTROLLER
17	100015	IS MGR
18	100016	MGR. OF DATA PROC
19	100017	MGR. OF MIS
20	100018	MGR. MIS
21	100019	DIR. OF MIS
22	100020	MIS MGR
23	100021	DIR. OF IS
24	100022	MGR. PGM OPS
25	100023	DIR. OF MIS
26	100024	DIR. OF ENG
27	100025	IS MGR
28	100026	MIS MGR
29	100027	IS MGR
30	100028	SYSTEMS ADMIN.
31	100029	DP MGR
32	100030	MGR. MAN. SYS
33	100031	DIR. MIS
34	100032	MATERIALS SUP
35	100033	DIR OF CIS
36	100034	IS MGR
37	100035	TECH. SYS. MGR
38	100036	PROJ. MGR
39	100037	SYSTEM S/W ANAL
40	100038	MGR. SUPPORT
41	100039	ACCTNG MGR
42	100040	MRG. SYS DEV
43	100041	SYS ANAL
44	100042	SYS MGR
45	100004	DIR. STATESIC SYS
46	100044	VP OF FIN.
47	100045	MGR. APPL. PROG.
48	100046	VP OF IS
49	100047	VP OF INFO MGMT
50	100048	DIR OF IS
51	100049	ASST. DIR OF OPS
52	100050	MGR IS
53	100051	MGR. APPL. DEV

REC#	GNUM	TITLE
54	100052	CONSULTANT
55	100053	APPL. PROG.
56	100054	DIR OF MIS
57	100055	OPS AND PRO MGR
58	100056	DIR. MIS
59	100057	VP OF MIS
60	100058	DIR MIS
61	100059	SR. DB ANAL
62	100060	SR. MGR.OF BUS. APP
63	100061	SYST. ENG
64	100062	MGR. IS
65	100063	OFFICE ADMIN
66	100064	MGR. OF APP DEV
67	100065	MGR MIS
68	100067	MGR.MAFG. APPL
69	100068	DIR. MIS
70	100069	MGR DP
71	100070	MGR IS
72	100071	NETWORK ADMIN
73	100072	MGR. BUS APPL
74	100073	ENG. ADMIN
75	100074	MIS MGR
76	100075	DIR BUS SYS
77	100076	MIS DIR
78	100078	MGR. SYS. PROG.
79	100079	IS MGR
80	100080	SYS ADMIN
81	100081	MGR. MFG. SYS
82	100082	SYS ANAL
83	100083	MGR OF IS
84	100084	DIR CORP IS
85	100085	DIR OF IS
86	100086	MGR. SYS SRVS
87	100087	APPL. MGR
88	100088	DB ADMIN
89	100089	MGR. DATA SYS DIV
90	100090	CORP. NETWORK ANAL
91	100091	DIR OF OPS-SALES SYS
92	100092	CORP.MGR. PRJCT LDR
93	100093	SR. TECH. SUPPORT
94	100094	PGRG. MGR
95	100095	CAD/CAM MGR
96	100096	APPL. MGR
97	100097	
98	100098	CORP. DIR MIS
99	100099	DIR MIS
100	100100	SYS. DEV. MGR
101	100101	CONTROLLER
102	100102	MGR IS
103	100103	COMPUTER SYS SUP.
104	100104	DATA PROC. MGR
105	100105	MIS MGR
106	100106	APPL. MGR
107	100107	MGR. SYS DEV
108	100108	MIS MGR
109	100109	SYS ENG

REC#	QNUM	TITLE
110	100110	COMP. CTR. SUP
111	100111	SYS ANAL
112	100112	VP OF IS
113	100113	DIR OF APP. DEV
114	100114	DIR OF INFO TECH
115	100115	MGR. DATA PROC
116	100116	MGR OF MFG AND ENG
117	100117	MGR. OF CORP IS
118	100118	DIR DATA PROC
119	100119	DIR OF IS
120	100120	MGR. OF MFG
121	100121	PROGRAM ANAL
122	100122	LOGISTICS MGR
123	100123	OPS MGR
124	100124	MGR INFO PROCESS
125	100125	DIR IS
126	100126	MGR GRP INFO SVCS
127	100127	SYS PGM MGR
128	100128	PROD SUP
129	100129	PROJ LEADER APPL PGM
130	100130	MGR. MIS
131	100131	SYST. ANALYST
132	100132	DIR IS
133	100133	SYS MGR

CONFIDENTIAL

List - code

INPUT Questionnaire

YA 6 Q NOM

Project Code/Catalog No. ☐☐☐☐☐☐☐☐☐

Study Title: Mfg. Applications

Interviewer Initials ☐☐☐

Interview Date ☐☐☐☐☐☐

Type of Interview:

☐ Vendor ☐ Telephone

☒ User ☐ On-Site

☐ Other ☐ Mail

QC Initials ☐☐☐

QC Date ☐☐☐☐☐☐

Data Entry Initials ☐☐☐

Data Entry Date ☐☐☐☐☐☐

SIC N4 code C1

Company: _____

Company Type: _____

Address: _____

N7 Sales: _____

Employees: _____

City/State/Zip: _____

Main Phone: ___/___-_____

FAX # _____

Respondent(s):

Name	Title	Phone/Ext.

2 Groups : Those that qualified & those that didn't

Referrals:

Later will run X-tabs on • Co size

3a 3b 3c 4 5b 6a-c, 7a • H, M, L And groups

N6

Industry (User Interviews Only):

1 XXXXX ☐ Discrete Mfg.
2 XXXXX ☐ Process Mfg.
3 ☐ Transportation
4 ☐ Utilities
5 ☐ Communications
6 ☐ Retail
7 ☐ Wholesale
8 ☐ Banking/Finance
9 ☐ Insurance
11 ☐ Medical
12 ☐ Services
13 ☐ Education
14 ☐ Federal Government
15 ☐ State & Local Government
~~☐ Consumer/Home~~
16 ☐ Other Industry Specific
~~☐ Cross-Industry~~

Comments:

RES 250/01
3/90

APPLICATIONS DIRECTIONS IN THE MANUFACTURING SECTOR

I am calling from INPUT, a research and consulting firm in Teaneck, New Jersey. We are conducting a study on applications development in manufacturing. The information that you provide will be confidential and neither your name nor your company's name will be connected with any of the information in this study. In return for your assistance, we will provide you with a summary of the study's findings at no charge.

I would like to understand your personal involvement with manufacturing applications. Please tell me how you are involved (circle "**approve**" and/or "**recommend**" as appropriate):

- Approve/recommend expenditures
- Approve/recommend new applications
- Approve/recommend changes to the technical environment
- Approve/recommend vendors to be used

Same as DEC

C2 A/R/AR

[If none of the above are circled, ask respondent what person they would recommend, thank them and terminate the survey.]

1a. Which of the following applications may be replaced in your firm in the next three years? What is the approximate probability of this occurring (for each application)? [Use table below.]

1b. Is your firm considering the use of a software package for applications that may be replaced? What is the probability of using a package? [Use table below.]

Application	% Prob	Package % Prob
MRP	.YY	
Distribution	1.00	
Engineering		
Financials		

IF PACKAGES ARE BEING CONSIDERED, GO TO 3.

1c. Would you consider an integrated application solution from one vendor, i.e., an application solution that would combine, for example, the manufacturing, distribution, and financial components?

Y/N/DK

2a. Why are packages not being considered?

TEXT

2b. What changes would make your firm consider using a package?

TEXT

Thank you for your cooperation. We will send you a study summary in about six weeks.

3a. What is driving the replacement?

Text & Code

Q3a C100

Q3A-100 -200

3b. In evaluating software packages for the applications above, please rate the importance of the following selection criteria below, using a scale of 1 to 5, with 5 being highest importance. Please comment on your rating; for example, if the criteria apply to one application more than another.

	Criteria	Rating	Comments
ET	Functionality	Q3BETR	C Text
EU	Ease of Use		
CS	Client/Server Technology		
IS	Installation Support by Vendor		
C	Cost		
Port	Portability		
VRep	Vendor reputation	Q3BVREPR	Q3BVREPC
GPV	Global Presence by Vendor		
O_1	Other:		
O_2			

3c. Which hardware/operating systems are being considered?

Text & 3 codes

Q3C

Q3C-100 -200

3d. What people or organizational units will be involved in making evaluations?

Q3D Text

4. Is your firm currently evaluating packages?

Q4 Yes _____ No _____

Q4_cmt If yes, which one(s)?

Text

5a. Some of the major operating environments that a package can run on include UNIX, AS/400, OS/2, Windows NT, and MVS. What do you see as the strengths and weaknesses of each of these as the operating environment for your applications?

Text & ~~2 codes ea~~ no codes

	Strengths	Weaknesses
Q5A UNS-1 UNIX		UN-W
AS-S AS/400		AS-W
OS OS/2		
NT Windows NT		
MV: MVS		

5b. Overall, on a scale of 1 to 5, with 5 being highest, how well do you think that each of these environments would meet your needs in 1994? In 1996? If there is a change, what is the reason?

	1994	1996	Reason
UNIX UN			Text (no code)
AS/400 AS			
OS/2 OS			
Windows NT NT			
MVS MV			

6a. Consider a fully functional, mature application written for an operating system other than UNIX. What do you see as the advantages and disadvantages of re-engineering that application (and porting it) to run under the UNIX environment?

Advantages

Test 2 or 3 Coder Cost

Disadvantages

6b. What do you see as the advantages and disadvantages for re-engineering the application from an MS-DOS base to a UNIX environment?

Advantages

Disadvantages

6c. From the AS/400?

Advantages

Disadvantages

7a. A number of major hardware and DBMS vendors offer UNIX-based products which could be used as platforms to run applications on. On a scale of 1 to 5 (with 5 being highest), how would you rate the suitability of the following UNIX-based products for running manufacturing applications software?

[Note: "Don't know" is acceptable.]

Hardware	Rating	Reason (if 1/2 or 4/5)
1-5, & DEC DEC (Alpha)		Text + 1 Code Check
HP HP		
IBM IBM (RS6000)		
SUN Sun		
Software		
INF Informix		
ORA Oracle		
PRO Progress		
SYB Sybase		

7b. Are there particular hardware/DBMS combinations in the preceding list that you believe would be especially attractive as a UNIX platform to your organization?

Text maybe code

7c. Are there other combinations not listed that would be attractive as a UNIX platform?

Text

8. If the designers of a manufacturing software asked your advice on what should be included in the next generation of software, what advice would you give?

Text no code

THANK YOU FOR YOUR PARTICIPATION.

Q3A C 100
Q3A_1CD C 02
Q3A_2CD C 02
Q3BFTR N 1
Q3BEUR N 1
Q3BCSR N 1
Q3BISR N 1
Q3BCR N 1
Q3BPORTR N 1
Q3BVREPR N 1
Q3BGPVR N 1
Q3BO-1R N 1
Q3BO-2R N 1
Q3BFTC C 75
Q3BEUC C 75
Q3BCSC C 75
Q3BISC C 75
Q3BCC C 75
Q3BPORTC C 75
Q3BVREPC C 75
Q3BGPVC C 75
Q3BO-1C C 75
Q3BO-2C C 75
Q3C C 100
Q3C_1CD C 02
Q3C_2CD C 02
Q3C_3CD C 02
Q3D C 100

Q4	C 1
Q4_CMT	C 100
Q5A_UNS	C 100
Q5A_ASS	C100
Q5A_OSS	C100
Q5A_NTS	C100
Q5A_MVS	C100
Q5A_UNW	C100
Q5A_ASW	C100
Q5A_OSW	C100
Q5A_NTW	C100
Q5A_MVW	C100
Q5A_UNS_1	C2
Q5A_UNS_2	C2
Q5A_ASS_1	C2
Q5A_ASS_2	C2
Q5A_OSS_1	C2
Q5A_OSS_2	C2
Q5A_NTS_1	C2
Q5A_NTS_2	C2
Q5A_UNW_1	C2
Q5A_UNW_2	C2
Q5A_ASW_1	C2
Q5A_ASW_2	C2
Q5A_OSW_1	C2
Q5A_OSW_2	C2
Q5A_NTW_1	C2
Q5A_NTW_2	C2

Q5AMV-1 C2
Q5AMV-2 C2
Q5BUN4 N1
Q5BAS4 N1
Q5BOS4 N1
Q5BNT4 N1
Q5BMV4 N1
Q5BUN6 N1
Q5BAS6 N1
Q5BOS6 N1
Q5BNT6 N1
Q5BMV6 N1
Q5BUN-C C75
Q5BAS-C C75
Q5BOS-C C75
Q5BNT-C C75
Q5BMV-C C75
Q6A-A C100
Q6A-D C100
Q6A-A-1 C2
Q6A-A-2 C2
Q6A-A-3 C2
Q6A-D-1 C2
Q6A-D-2 C2
Q6A-D-3 C2

~~select~~
~~[2]-4~~
~~[2]-4~~
~~[2]-4 [illegible]~~
TOP↵
POFF↵
Select all↵
Quit↵
EXIT↵
Shut off screen, CPU + printer separately

Q6B_A C100
Q6B_D C100
Q6B_A_1 C2
Q6B_A_2 C2
Q6B_A_3 C2
Q6B_D_1 C2
Q6B_D_2 C2
Q6B_D_3 C2.
Q6C_A C100
Q6C_D C100
Q6C_A_1 C2
Q6C_A_2 C2
Q6C_A_3 C2
Q6C_D_1 C2
Q6C_D_2 C2
Q6C_D_3 C2.
Q7A_DEC_R N1
Q7A_HP_R N1
Q7A_IBM_R N1
Q7A_SUN_R N1
Q7A_INF_R N1
Q7A_ORA_R N1
Q7A_PRO_R N1
Q7A_S4B_R N1

Q7A DEC C	C 75
Q7A HP C	C75
Q7A IBM C	C75
Q7A SUN C	C75
Q7A INFC	C75
Q7A ORAC	C75
Q7A PROC	C75
Q7A SYBC	C75
Q7A DEC C1	C2
Q7A HPCC1	C2
Q7A IBMC1	C2
Q7A SUNC1	C2
Q7A INFC1	C2
Q7A ORAC1	C2
Q7A PROC1	C2
Q7A SYBC1	C2
Q7B	C100
Q7B	C100
Q8	C100

COPY
A:\YA6-4
ALL
EDIT

ok. ② YA6-3B / daniel 100101 - 100120 (20), 100130 - 100133 (4)
YA6-2 100001 - 100049 5119
ok. ① YA6-3 100050 - 100100
ok. ③ YA6-3B - LON. 100121 - 100129 ⑨ records

YA6-1 ~~1-30~~
YA6-2 ~~30-100~~
YA6-3 10
YA6-3B
YA6-3B1

58 & 74

COMMAND: FREQ MISSING VALUE TREATMENT: VARWISE

FREQUENCY REPORT OF Q5BUN4

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-2.18068	0.4
1	15	16	11.6	12.4	-1.61694	6.6
2	7	23	5.4	17.8	-1.05320	15.1
3	30	53	23.3	41.1	-0.489452	29.5
4	30	83	23.3	64.3	0.0742919	52.7
5	36	119	27.9	92.2	0.638036	78.3
8	10	129	7.8	100.0	2.32927	96.1
TOTAL	129	129	100.0	100.0		

(1) Where did "8"s come from?

FREQUENCY REPORT OF Q5BAS4

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.57883	0.4
1	28	29	22.4	23.2	-1.15982	12.0
2	16	45	12.8	36.0	-0.740810	29.6
3	19	64	15.2	51.2	-0.321800	43.6
4	14	78	11.2	62.4	0.0972104	56.8
5	26	104	20.8	83.2	0.516221	72.8
8	21	125	16.8	100.0	1.77325	91.6
TOTAL	125	125	100.0	100.0		

(2) Please calc mean

FREQUENCY REPORT OF Q5BOS4

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.28415	0.4
1	37	38	29.6	30.4	-0.917669	15.6
2	26	64	20.8	51.2	-0.551188	40.8
3	18	82	14.4	65.6	-0.184707	58.4
4	10	92	8.0	73.6	0.181775	69.6
5	3	95	2.4	76.0	0.548256	74.8
8	30	125	24.0	100.0	1.64770	88.0
TOTAL	125	125	100.0	100.0		

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FREQUENCY REPORT OF Q5BNT4

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	2	2	1.6	1.6	-1.50294	0.8
1	24	26	18.8	20.3	-1.10547	10.9
2	19	45	14.8	35.2	-0.707999	27.7
3	30	75	23.4	58.6	-0.310526	46.9
4	17	92	13.3	71.9	0.0869472	65.2
5	8	100	6.3	78.1	0.484420	75.0
8	28	128	21.9	100.0	1.67684	89.1
TOTAL	128	128	100.0	100.0		

FREQUENCY REPORT OF Q5BMV4

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.32124	0.4
1	47	48	37.6	38.4	-0.988935	19.6
2	10	58	8.0	46.4	-0.656632	42.4
3	7	65	5.6	52.0	-0.324328	49.2
4	8	73	6.4	58.4	0.00797528	55.2
5	13	86	10.4	68.8	0.340279	63.6
8	39	125	31.2	100.0	1.33719	84.4
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q5BUN6

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	11	11	8.7	8.7	-1.73023	4.3
2	11	22	8.7	17.3	-1.16096	13.0
3	27	49	21.3	38.6	-0.591685	28.0
4	24	73	18.9	57.5	-0.0224123	48.0
5	43	116	33.9	91.3	0.546860	74.4
8	11	127	8.7	100.0	2.25468	95.7
TOTAL	127	127	100.0	100.0		

FREQUENCY REPORT OF Q5BAS6

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.62412	0.4
1	26	27	20.5	21.3	-1.20742	11.0
2	16	43	12.6	33.9	-0.790732	27.6
3	18	61	14.2	48.0	-0.374039	40.9
4	16	77	12.6	60.6	0.0426536	54.3
5	27	104	21.3	81.9	0.459346	71.3
8	23	127	18.1	100.0	1.70942	90.9
TOTAL	127	127	100.0	100.0		

FREQUENCY REPORT OF Q5BOS6

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.31372	0.4
1	35	36	28.0	28.8	-0.945525	14.8
2	27	63	21.6	50.4	-0.577330	39.6
3	15	78	12.0	62.4	-0.209135	56.4
4	13	91	10.4	72.8	0.159060	67.6
5	4	95	3.2	76.0	0.527256	74.4
8	30	125	24.0	100.0	1.63184	88.0
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q58NT6

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.72781	0.4
1	18	19	14.1	14.8	-1.31210	7.8
2	13	32	10.2	25.0	-0.896384	19.9
3	28	60	21.9	46.9	-0.480670	35.9
4	23	83	18.0	64.8	-0.0649554	55.9
5	16	99	12.5	77.3	0.350759	71.1
8	29	128	22.7	100.0	1.59790	88.7
TOTAL	128	128	100.0	100.0		

FREQUENCY REPORT OF Q58MV6

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
0	1	1	0.8	0.8	-1.27115	0.4
1	47	48	38.5	39.3	-0.943975	20.1
2	13	61	10.7	50.0	-0.616802	44.7
3	8	69	6.6	56.6	-0.289629	53.3
4	5	74	4.1	60.7	0.0375445	58.6
5	9	83	7.4	68.0	0.364718	64.3
8	39	122	32.0	100.0	1.34624	84.0
TOTAL	122	122	100.0	100.0		

COMMAND: FREQ MISSING VALUE TREATMENT: VARWISE

FREQUENCY REPORT OF Q7ADEC_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	2	2	1.6	1.6	-2.00593	0.8
2	7	9	5.6	7.2	-1.58941	4.4
3	21	30	16.8	24.0	-1.17290	15.6
4	25	55	20.0	44.0	-0.756387	34.0
5	4	59	3.2	47.2	-0.339874	45.6
8	66	125	52.8	100.0	0.909664	73.6
TOTAL	125	125	100.0	100.0		

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FREQUENCY REPORT OF Q7AHP_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	3	3	2.4	2.4	-2.08202	1.2
2	2	5	1.6	4.0	-1.58440	3.2
3	18	23	14.4	18.4	-1.08679	11.2
4	34	57	27.2	45.6	-0.589175	32.0
5	31	88	24.8	70.4	-0.0915610	58.0
8	37	125	29.6	100.0	1.40128	85.2
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q7AIBM_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	2	2	1.6	1.6	-1.84842	0.8
2	3	5	2.4	4.0	-1.38632	2.8
3	33	38	26.6	30.6	-0.924211	17.3
4	34	72	27.4	58.1	-0.462106	44.4
5	13	85	10.5	68.5	0.00000	63.3
8	39	124	31.5	100.0	1.38632	84.3
TOTAL	124	124	100.0	100.0		

FREQUENCY REPORT OF Q7ASUN_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	4	4	3.2	3.2	-1.90316	1.6
2	4	8	3.2	6.3	-1.46236	4.8
3	24	32	19.0	25.4	-1.02155	15.9
4	28	60	22.2	47.6	-0.580745	36.5
5	18	78	14.3	61.9	-0.139938	54.8
8	48	126	38.1	100.0	1.18248	81.0
TOTAL	126	126	100.0	100.0		

FREQUENCY REPORT OF Q7AINF_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	3	3	2.4	2.4	-2.38060	1.2
2	2	5	1.6	4.0	-1.94555	3.2
3	21	26	16.8	20.8	-1.51050	12.4
4	11	37	8.8	29.6	-1.07545	25.2
5	3	40	2.4	32.0	-0.640395	30.8
8	85	125	68.0	100.0	0.664757	66.0
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q7AORO_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	3	3	2.4	2.4	-1.76656	1.2
2	8	11	6.4	8.8	-1.33442	5.6
3	26	37	20.8	29.6	-0.902291	19.2
4	36	73	28.8	58.4	-0.470160	44.0
5	7	80	5.6	64.0	-0.0380276	61.2
8	45	125	36.0	100.0	1.25837	82.0
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q7APRO_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	2	2	1.6	1.6	-2.27089	0.8
2	6	8	4.8	6.4	-1.83949	4.0
3	20	28	16.0	22.4	-1.40809	14.4
4	7	35	5.6	28.0	-0.976689	25.2
5	13	48	10.4	38.4	-0.545289	33.2
8	77	125	61.6	100.0	0.748910	69.2
TOTAL	125	125	100.0	100.0		

FREQUENCY REPORT OF Q7ASYB_R

VALUE	FREQ	CUM FREQ	%	CUM %	Z SCORE	PERCENTILE
1	1	1	0.8	0.8	-2.17925	0.4
2	7	8	5.6	6.5	-1.74619	3.6
3	17	25	13.7	20.2	-1.31314	13.3
4	20	45	16.1	36.3	-0.880080	28.2
5	10	55	8.1	44.4	-0.447025	40.3
8	69	124	55.6	100.0	0.852141	72.2
TOTAL	124	124	100.0	100.0		